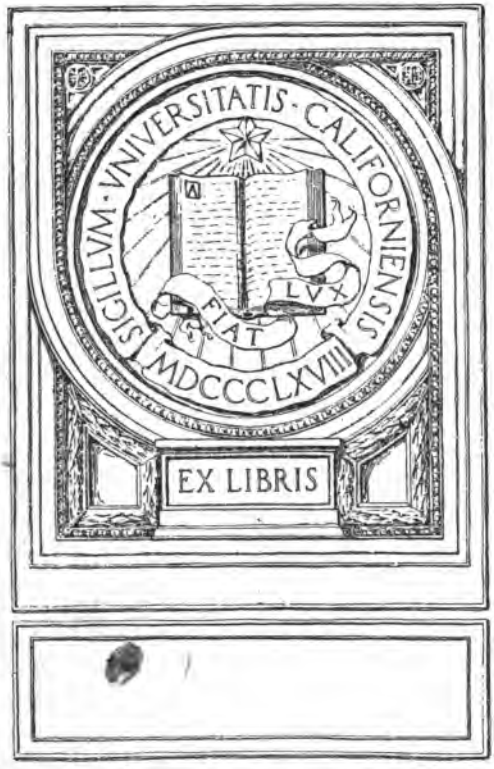
SIGILLVM · VNIVERSITATIS · CALIFORNIENSIS
LVX
FIAT
MDCCCLXVIII
EX LIBRIS

HIGHER EDUCATION AND THE WAR

BY

JOHN BURNET

OFFICIER DE L'INSTRUCTION PUBLIQUE

DEAN OF THE FACULTY OF ARTS IN THE UNIVERSITY OF ST. ANDREWS

MACMILLAN AND CO., LIMITED

ST. MARTIN'S STREET, LONDON

1918

First Edition 1917.
Reprinted 1918.

GLASGOW: PRINTED AT THE UNIVERSITY PRESS
BY ROBERT MACLEHOSE AND CO. LTD.

PRO PATRIA ET HVMANITATE

IN PIAM MEMORIAM

THEODORE PRAIN, M.A. with Second Class Honours in Classics (1908), Lieutenant, First Battalion, The Leicestershire Regiment, mentioned in Dispatches, killed in action, 21st October, 1914.

CYRIL THOMSON BROOM, Medallist in Greek, Candidate for Honours in Classics, Second Lieutenant, 10th S. Battalion, Highland Light Infantry, missing since 12th July, 1915.

JOHN MURRAY STEWART KENNEDY, M.A. (1914), Guthrie Scholar in Classics (1912), Lieutenant, 8th S. Battalion, Seaforth Highlanders, killed in action, 10th August, 1915.

JOHN DAWSON, M.A. (1914), B.Phil., Ramsay Scholar in Classics (1912), Berry Scholar in Classics (1913), Blair Prizeman in Greek, Second Lieutenant, 11th S. Battalion, The Gordon Highlanders, killed in action, 25th September, 1915.

JAMES RANKIN FALCONER, Blair Prizeman in Greek, Candidate for Honours in Classics, Second Lieutenant, 12th S. Battalion, Highland Light Infantry, killed in action, 25th September, 1915.

JAMES WARDEN JARVIS, M.A. (1913) with Second Class Honours in Classics, Lieutenant, 7th S. Battalion, King's Own Scottish Borderers, killed in action, 25th September, 1915.

CHARLES WHITEHEAD YULE, M.A. with First Class Honours in Classics, B.Litt. (1911), Captain, 13th S. Battalion, Royal Scots, killed in action, 1916.

WILLIAM STEWART ROBERTSON, Candidate for Honours in Classics, Lieutenant, 10th S., attached 4th Battalion, The Black Watch, mentioned in Dispatches, Military Cross, killed in action, 1916.

WILLIAM SCOTT BOYLE, Candidate for Honours in Classics, Second Lieutenant, 11th S. Battalion, The Cameronians (Scottish Rifles), killed in action, January, 1917.

PREFACE

THE following chapters are based on lectures delivered for the St. Andrews Provincial Committee and otherwise, and it may be well to say that most of my criticisms on the German educational system were published in an address to the Secondary Education Congress on 17th May, 1913. They are not, therefore, unduly influenced by the present war. I have thought it best to retain the lecture form.

This little book is an inadequate tribute to the memory of my pupils who have fallen. I know at least that it expresses some things which they felt strongly. The names which I have printed in the dedication represent only a single department of one small university. Pericles said truly *τὴν νεότητα ἐκ τῆς πόλεως ἀνῃρῆσθαι ὥσπερ τὸ ἔαρ ἐκ τοῦ ἐνιαυτοῦ εἰ ἐξαιρεθείη.*

J. B.

ST. ANDREWS,
February, 1917.

CONTENTS

CHAPTER I

PAGE

KULTUR - - - - - - - - 1

CHAPTER II

HUMANISM - - - - - - - - 38

CHAPTER III

HIGHER EDUCATION IN GERMANY - - - 69

CHAPTER IV

THE SEAMY SIDE - - - - - - 106

CHAPTER V

HOME AND SCHOOL - - - - - 135

CHAPTER VI

PAGE
SCHOOL AND UNIVERSITY - - - - 157

CHAPTER VII

SCOTLAND AND PRUSSIA - - - - - 181

CHAPTER VIII

CONCLUSIONS - - - - - - - 214

CHAPTER I

KULTUR

"Don't imagine for a moment that you can establish here something satisfactory by merely following the pattern of a foreign country. Our notions are entirely different from those of Germany."

Viscount Haldane, *Education and Empire*, p. 57.

In spite of Matthew Arnold's efforts to acclimatise it, the word 'culture' is not very seriously taken among us. We think of a cultured person as one who pretends to appreciate things that seem meaningless to most of us, and who is too impatient of the people's untutored admirations. That is why, when the Germans talk of their *Kultur*, we are apt to smile. Of course we know they must mean something quite different,[1] but we hardly care to inquire what it is. That is a mistake. The Germans say and believe they are fighting for the maintenance and expansion of their *Kultur*,

[1] The German for 'culture' is *Bildung*, not *Kultur*.

and we may fairly infer that to be the very thing we are bound to resist. At the beginning of the war we used to say that we were only fighting Prussian militarism, but we had not long to wait for our answer. A manifesto was issued, signed by ninety-three of Germany's foremost scholars, theologians and men of science, in which they declared amongst other things that, but for militarism, German civilisation would have been destroyed long ago.[1] That surely gives us something to think about. It does not do to ignore the enemy's point of view, and there is a real danger that the sacrifices we are making may prove to have been made in vain unless we try to understand it. It would be little use to defeat the Germans in the field if we were to fall under the influence of German *Kultur*, and this danger is nowhere so great as in all matters connected with education. There is no doubt that German 'organisation' has a strange fascination for many perfectly loyal Britons, while there are others who say that, since the end the Germans aim at can never be ours, it is a matter

[1] Similarly a manifesto published on October 10th, 1914, and signed by 3,200 university professors and teachers in the Higher schools, contains this declaration: "We firmly believe that the salvation of the whole of European civilisation depends on the victory of German militarism."

of indifference what means they take to attain it. I hope to show that the question is not nearly so simple as either party imagines. There is a real breach between the *Kultur* of modern Germany and the educational system she has inherited from the early years of the nineteenth century, and that is at the bottom of all recent educational controversies in that country. We are too apt to think that important paedagogical principles must be involved, when as often as not the issues are purely political. That makes the whole question very hard to deal with, but we cannot get away from it; for ever since the time of Matthew Arnold our own controversies have taken shape under the influence of German ideas, whether these were regarded with admiration or the reverse. It is now high time for us to make up our minds what our attitude towards German education is to be. The present state of the world calls for a thorough examination of everything we have been accustomed to take for granted, and I propose to do what I can to prepare the way for such an examination in one of the most important departments of the national life, that of Higher Education. It is here especially that Germany is held up to us as an example or a warning, and we are

bound to try to find out what this means. It will not do to accept or reject anything simply because it is German; we must ask what the German system actually is and what it is intended to do, and we cannot answer that question till we know exactly what is meant by German *Kultur*.

I

In itself, the word *Kultur* is innocent and even useful. According to the historian Eduard Meyer (one of the signatories of the manifesto), it means the inherited stock of bodily and mental peculiarities, ideas, customs and social arrangements which characterise a given group of human beings, a stock which is handed down and increased from generation to generation,[1] so that *Kultur* may be roughly translated by our word 'civilisation.' There is, however, an important difference in the use of the words. We usually think of Civilisation as something which properly belongs to mankind as a whole, and in which different groups of men may participate more or less fully. It is the standard by which any particular *Kultur* in the German sense is to be judged. We are committed to this as soon as we say, as

[1] *Geschichte des Altertums, Einleitung*, § 4.

we often do, that one community is more civilised than another. It is true that the Germans also speak of certain forms of *Kultur* as superior to others, but not quite from the same point of view. They regard French *Kultur* as decadent and Russian *Kultur* as primitive in comparison with their own, but it does not come natural to them to judge any and every *Kultur*, their own included, by a universal human standard. No doubt this is primarily a question of emphasis. We ourselves speak quite freely, for instance, of Greek or American civilisation, while German writers admit the possibility of a 'collective *Kultur*' (*Gesamtkultur*), in which a number of separate national groups may participate. Still, there remains this difference, that, when we speak of Greek civilisation, we are consciously restricting the application of the word, while the German feels he is stretching the natural meaning of *Kultur* when he speaks, as he sometimes does, of European *Kultur* as opposed to Asiatic. For the present, we may express this difference by saying that to the German *Kultur* is in the first place something national, while to the Frenchman or the Englishman Civilisation is primarily something human.

It adds considerably to the difficulty of under-

standing these things that the Germans now use the word *Zivilisation* in the sense of material and technical progress (telephones, motor-cars, aeroplanes, etc.) to the exclusion of the moral and spiritual elements included in *Kultur*. That is what they mean when they say that in this country we have *Zivilisation* but no *Kultur*. It is no use telling a German that we are fighting for Civilisation. He understands that to mean we are fighting for material comfort, which is exactly what he believes about us already. The confusion is increased still further by Professor Ostwald, who is a law to himself and defines *Kultur* as the power of transforming energy, which is only a scientific way of describing what most Germans call *Zivilisation* and not *Kultur*. We have to be on the lookout for ambiguities of this kind.[1]

From the German point of view, it follows at once that a *Kultur* can only be maintained by the

[1] The modern German use of these words seems to be of recent origin. At any rate, W. von Humboldt defined *Zivilisation* as "the humanisation of peoples in their external institutions and customs and in the inner sentiments relating to these," while *Kultur*, according to him, "adds Science and Art to this ennoblement of social conditions" (*Ueber die Verschiedenheit des menschlichen Sprachbaus*, § 4). That is much more like the way in which the words are still used in English and in French.

State ; for nothing else is strong enough to adjust the conflicting claims which necessarily arise within the group. Neither the tribe nor the family is equal to the task. That is the origin of Right or Law, which is simply a declaration of the principles on which the State will employ its force, whether those principles are explicitly embodied in legislative acts or implicit in custom. It follows that, where there is no State, there can be no Right, and that states can stand in no legal or juridical relations to one another. That is why it is meaningless to talk of International Law. No sovereign State can recognise any law above its own. The nations are still in the state of Nature, in which Might is the only Right. I need not insist further on this, since recent events have made the meaning of the German theory sufficiently plain.

Now it cannot, I think, be doubted that this way of looking at the State arose from the spectacle presented by the Holy Roman Empire of German Nation down to the day of its abolition by Napoleon. Everyone who has had to study the writings of German historians knows that to most of them there is something almost sacred in force as such. The Germans are inordinately proud of

their victory over the Romans in 9 A.D., and their school children are regularly regaled with the picture of Augustus exclaiming *Varus, Varus, gieb mir meine Legionen wieder*, but it was really a great misfortune for them, since it has stood in the way of their becoming a nation till the other day. The so-called Holy Roman Empire was utterly impotent, and the allegiance of the Germans was divided for centuries among a host of anarchical sovereignties. It is, in fact, just because they had suffered so much from the impotence of the State that they have come to exalt force above everything as they do now. They believe that, but for the strong arm of Prussia, there would be no German nation, and therefore no German *Kultur*, to-day, and that is what the ninety-three 'intellectuals' mean by saying that German militarism is the only safeguard of German *Kultur*. Of course it seems strange to us. A nation that has long enjoyed a high civilisation is apt to take these things for granted. We are not foolish enough to deny that the State must rest on force, but since the seventeenth century we have advanced some way beyond such very elementary political notions. The memory of the Thirty Years' War seems to haunt the Germans still, and they are apparently

afraid they might fly at each others' throats again if Prussia were not there to keep them in order. They may be right, and they ought to know best, so we must just take their word for it.

For our present purpose the application of the doctrine is this. Education in all its grades must be regulated in view of the national *Kultur*, and not with reference to any vague ideal of humanity. In the first place, Elementary education must be compulsory (*Schulpflicht*), because military service is universal (*Wehrpflicht*), and so is the Imperial franchise (*Wahlrecht*). These three things go closely together. It is necessary, in the interests of the State, that its soldiers should have a certain education, and it should be of a kind to increase their military value. It is also necessary that the electors should be educated in such a way as not to make a bad use of their votes. At the other end of the scale it is necessary, in the interests of the State, that its officers and functionaries of all kinds should be the best that can be got, and that can only be secured by a system of Higher education which will select the best and eliminate the unfit. It follows, of course, that the whole educational system should be regulated by the State, and so it is; but here we come to the first breach

between the ideals of modern German *Kultur* and the existing system of education. The State which ought logically to have control of education is the German Empire, but, in fact, the twenty-six federated states have retained this control almost entirely in their own hands.[1] Not to speak of free cities like Hamburg, even Anhalt and Reuss have certain peculiarities of their own. No doubt the North German States follow the lead of Prussia in most educational matters, but Saxony, Bavaria, Württemberg and Baden are under no obligation to adopt all the paedagogical ideas of the Kaiser, and as a matter of fact they go their own way in many things.

II

When pushed to its extreme limit this ideal takes the form of what is called Pangermanism,

[1] The government of the Empire only comes into contact with Higher education at a few points. The conditions under which schools may grant the certificate for military service for one year as a volunteer (*Einjährig-Freiwilliger*) are determined by the Imperial Chancellor on the advice of the Imperial School Commission. The Federal Council (*Bundesrat*) regulates the State examinations for the medical profession and the conditions of admission to the study of medicine. The Emperor decides upon the admission of officers to the Army (except that of Bavaria) and the Navy. Everything else is left in the hands of the federated states.

and it is worth while to note that this substitution of the idea of race for that of nationality is due to the fact that the Germans are not a nation even now. The deliberate exclusion of Austria from the German Empire by Bismarck amounted to a confession that a German nation was impossible, and Pangermanism is the inevitable outcome of Prussia's failure to create a real German unity. Whatever the ultimate issue of the question here involved may be, it has led to the present insistence on race, which is of the essence of Pangermanism. Of course it is based on a fiction. There is no German race, or if there is, the majority of the German people do not belong to it.[1] There are German-speaking peoples, but the German language is not conterminous with the German Empire, and it is hard to see how it can ever become so. That is the inner contradiction from which Pangermanism suffers.

The German Emperor is not, perhaps, a full-blooded Pangermanist, but he is certainly inclined to magnify the part Germany is called upon to play in the world. When he said at Bremen in 1902, 'We are the salt of the earth! God has called us to civilise the world,' he was perfectly sincere.

[1] See Ripley, *Races of Europe*, p. 214.

His idea is that Germany should do for Europe what Prussia has done for Germany, and behind that there is a prophetic vision of a Germanised Europe playing a similar part on the wider stage of the world by dealing with the Yellow Peril and the like. What makes all this so dangerous is just that it is based on religious and philanthropic motives, which give a sort of sanctity to Pan-germanist ambitions. The mass of the German people are quite honestly persuaded that it is their task to rescue Europe from anarchy, and they have been taught in their schools and by their press to look on this as a divine mission.

No one who ever reads German newspapers will say that this is an exaggerated account of the doctrine many of them preach, but it is important for us to realise that it is shared by some of the foremost men in the Empire. Professor Ostwald is a distinguished chemist and has a great reputation in other countries than his own. Shortly after the outbreak of the war he announced that, after the victory, it would be the task of Germany to secure that Europe should be able to work in peace, and for that reason Germany alone would remain armed. The work would not, however, be performed as hitherto; it would be 'organised'

and everyone would be assigned that share in it for which he is best fitted. Germany would decide as to these aptitudes, and would assign to each its task. She will be generous, however, in some respects. In particular, she will not impose either her language, her thought or her aesthetics on foreign nations by force, but once it is established, the predominance of Germany will soon get the better of all obstacles to the spread of Germanism arising from the particularism of the conquered nations. On the other hand, Ostwald holds, the defeat of Germany would mean the supremacy of the lower instincts over the higher, of the brute over man, and a set-back to morality, which would herald the downfall of European civilisation.[1]

These are not the ravings of a half educated Pangermanist, but the deliberate utterances of one of the foremost representatives of German Science, who really believes that he is advocating what is for the good of mankind. He even regards himself as a 'pacificist.' In a letter to a friend in America he writes; "We pacificists must only

[1] A translation of this outburst appeared in the *Semaine littéraire de Genève* for Oct. 17th, 1914. Ostwald is fond of insisting that the function of Science is to enable us to prophesy. This is no doubt a specimen.

understand that unhappily the time is not yet sufficiently developed to establish peace in the peaceful way." It is the English policy of World Dominion that counteracts "the eminently peaceful sentiment of the greatest part of the people, and especially of the German Emperor."[1] Similarly Professor von Wilamowitz-Moellendorff, in a lecture reported in the *Times* of Sept. 11, 1914, deplores the absence of any effective sanction for international law, and says the only hope is for Germany "to dictate peace to the rest of Europe." I do not quote these utterances merely for their absurdity. I wish to suggest at once that modern German *Wissenschaft* appears to produce a very curious way of thinking. I for one would not choose to know as much Greek as Wilamowitz or as much Chemistry as Ostwald at the price of having my mind work like that.[2]

[1] This is quoted by Mr. A. D. Lindsay in *Oxford Pamphlets*, No. 16, p. 14.

[2] It is desirable to put on record the view held by Wilamowitz before the war with regard to the debt of German classical scholarship to this country. In the preface to his edition of the *Bucolici Graeci*, published at the Clarendon Press in 1905, he said: "Germanum philologum, si potest, gratiam referre decet Britanniae, e qua ante hos centum annos accurata linguae Graecae cognitio nobis tradita est. imprimis autem viro bono

III

The ideal of German *Kultur*, then, is a purely nationalist one; it is what distinguishes the Germans from other nations, and it would naturally follow that German education should be directed solely to the inculcation of Germanism or *Deutschtum*. I understand that this is in fact the chief aim of Prussian elementary education, and that the ready acceptance of a narrow nationalist ideal by the mass of the public is due to that. The system of Higher education, however, is not the creation of modern German *Kultur*, and has been very imperfectly assimilated by it even now. It originated, in fact, at a time when there was no German State and when Prussia was under the domination of Napoleon, and there could therefore be nó national *Kultur* in the modern sense. That is why the Pangermanists assail the German Higher schools so bitterly. They object to the teaching of foreign languages as tending to under-

et patriae et humanitatis amanti nihil sanctius est colendum communione illa bonarum artium, per quam quicumque inter omnes gentes vero investigando vitam impendimus, vel ut breviter dicam, quicumque γνησίως φιλοσοφοῦμεν, regibus populisque viam praeimus quae sola ad mundi salutem et concordiam ducit." That is the voice of 'the other Germany.'

mine patriotism, and especially to the teaching of Classics, which has for its object what is common to western Europe, the Graeco-Latin *Kultur*. As the greater part of what is now Germany did not form part of the Roman Empire, that is something alien to it. Nor do they care about the classical literature of Germany itself. The writings of Goethe and Schiller are suspect of cosmopolitanism and should only be studied (with due precautions) in the highest classes of the school. In the lower division the literary part of the curriculum will be confined to Gothic, Old High German and Middle High German when the Pangermanists get their way.[1] As for Science, that is frankly international, and is for the most part the work of

[1] In the *Rheinisch-Westfälische Zeitung* (published at Essen) of July 18th, 1911, a truly national curriculum was outlined by the Germanist Baesecke. In this the only language to be studied in the two lowest classes of the school is Gothic. Old High German begins the next year and Middle High German two years later. Modern High German is confined to the three highest of the nine classes when the boys have been rendered immune to the cosmopolitan taint of Weimar and Jena by their previous study of the older literature. The curious thing is that Latin and Greek are not dropped altogether (why not?), though they too are confined to the three highest classes when the boys are seventeen and over. French of course is eliminated.

Frenchmen, Italians and Englishmen, so there will be as little of that as possible. Even the Christian religion is dangerous because of its humanitarian tendencies, and the Hotspurs of the party, the out and out *Deutschtümler*, are all for reviving the cults of Odin and Thor. Of course the German Emperor does not go to these extremes, but he is undoubtedly accessible to ideas of the kind, and he too advocates a 'national German education.' That is the real meaning of his famous outburst against the Gymnasium at the December conference of 1890, when he accused it of producing young Greeks and Romans instead of young Germans.[1] We shall misunderstand his attitude unless we remember all this. We shall see that he afterwards felt he had gone too far and tried to undo the effect of what he had said, but the 'King's Peace,' as it is called, of 1900 is only a truce. The whole future of German Higher education depends on the issue of the struggle between Humanism and Nationalism.

To most people it cannot but seem that Germany has suffered a heavy loss in departing from the educational ideals of her great age, and

[1] "Wir sollen nationale junge Deutsche erziehen und nicht junge Griechen und Römer."

that she will have to go back to them if she is ever to hold up her head again. At one time she was in a fair way to become the intellectual centre of Europe, and if that had happened she would have been irresistible. The change that has come over her is just that which Plato describes as the transition from Timocracy to Oligarchy,[1] and the educational system devised by von Humboldt for quite another purpose has been made to serve the ends of a society such as he never contemplated. No one can tell yet whether the war will bring about a reaction towards better things or whether it will increase the influence of the Pangermanists. In that case, we may write *finis Germaniae*, but it would be better for Europe in every way that it should not happen. The only thing that can prevent it is the German system of Higher education and we cannot be sure that it is strong enough. There have been indications of late years that some of those who should have been champions of Humanism have been tempted to make terms with the unclean thing. It is an ill day for a people when it mistakes nationalism for patriotism.

[1] *Rep.* VIII. 550 a, *sqq.* Plato was thinking mainly of Sparta, but the parallelism with Prussia is very exact.

IV

Now a great deal of misunderstanding arises from the fact that men of a certain age and a certain education fail to realise that it is this nationalist *Kultur* which is alone familiar to the British public of to-day, and even to the younger generation of educated men, and that it is extremely repugnant to them. No doubt it was the violation of Belgian neutrality that helped many good people to see that we were right in drawing our somewhat rusty sword, but that was only because it was a peculiarly glaring instance of something that went far beyond the particular case. If we ask how it was that the whole nation was roused at once the moment a German soldier crossed the frontier at Visé, the answer is clear. It was not merely the 'scrap of paper.' That holds an important place in the diplomatic case against Germany, but most people had never heard of it. Few of us knew anything about the history of Belgium and fewer still felt any particular sympathy for the Belgian people. They had not yet proved they had the soul of a nation. The response of our people would have been exactly the same on those memorable August days of

1914 if no treaty had ever been signed in 1839; for they had grasped something that had eluded them before, and there can be no doubt that what opened their eyes to it was the rhetoric of the German Emperor. His picturesque phrases had become household words among us, and the least instructed of us felt there was something behind them which was incompatible with western civilisation and which we should have to resist if it tried to assert itself. That something was just modern German *Kultur*, though our people did not learn the word till a week or two later. They will never forget it now. They knew too that the French people, in spite of all that had happened to estrange us in the past, spoke and thought of these things in a way that may have seemed over emphatic to the ordinary Englishman, but was in substance the same as our own. So we took to singing the Marseillaise with complete conviction, regardless of the fact that we had helped Prussia to get the better of the men who sang it first, and that the 'tyrants' referred to in the song may fairly be held to include ourselves. At that date modern German *Kultur* had not been invented and the methods of the French Revolution did not appeal to us. This time it was different. The

popular instinct is not very subtle but it is sometimes very sound.

Nowhere was the call of the nation more promptly answered than in the universities. To some extent, no doubt, that may be attributed to the patriotic pugnacity and love of adventure happily characteristic of youth, but that was by no means all. Some of us know, indeed, that most of the talk which might have suggested such a superficial explanation was only a cloak for a deep seriousness. It was a high privilege to be a university teacher in those early days of the war, when one's best students came to say goodbye and revealed something of what they were really thinking. We, who were their teachers, know why these young men went at once without waiting to be fetched. It was certainly not that they might help to 'capture German trade.' They were not particularly interested in trade, and I do not remember that one of them ever referred to the economic aspect of the war. Nor was it that they had any strong objection to Prussian militarism as such; they were more likely to fancy we should be all the better for a little more of that ourselves. What they really dreaded was the intellectual and moral influence of modern Germany,

and being students they were extremely sensitive with regard to any proposals to 'Germanise our educational system,' as they put it. To understand their point of view, we must realise that they were born in the nineties of last century, and that Germany meant something quite different to them than it meant to the men of the Victorian age, when there was still a tradition that Germany stood for philosophy, learning, music and simplicity of life. They had heard of that, to be sure, just as they had heard of the Reformation and the French Revolution, but it never occurred to them that it could have anything but a historical interest now. The name of Essen was a good deal more familiar to them than that of Weimar. If we forget the point of view of the younger generation, misunderstandings easily arise. Our late beloved Principal at St. Andrews, Sir James Donaldson, had known Germany in better days and owed much to German learning, and it was natural that he should often address our students on the excellences of German education. He did not know that, if anything could have destroyed the affectionate regard in which they held him, it would have been that. In October, 1914, he had to address them at the opening of our College,

and a voice was heard to murmur reproachfully "German education again!" Fortunately what he had to say was very different; it was a call to the service of the country and was received with enthusiasm. One of my students, who has since given his life for the cause he believed in, said to me before he went that the war clearly meant the breakdown of German education. It could not have happened if the Germans had really been an educated people. It seems to me very important that statesmen and educational reformers should realise the extreme sensitiveness of the younger generation on this point. It is a factor in the case which it would be dangerous to ignore.

Even in Germany itself, the older generation does not appear to be fully conscious of the change that has taken place within the last half century. That, at any rate, is the only way in which I can account for the fact that the ninety-three 'intellectuals' refer us to Kant, Beethoven and Goethe to show us what is meant by German *Kultur*. Kant died in 1807, Beethoven in 1827 and Goethe in 1832. The *Kritik of Pure Reason* and *Faust* (in its original form) are earlier than the French Revolution, and it would surely have been a good deal more convincing to adduce some

rather more recent representatives of German *Kultur* than these. Besides, from what we know of the men, we may doubt whether they would have been altogether pleased by its later developments. Kant was a Prussian (though his grandfather was a Scotsman), but he busied himself among other things with a scheme for securing everlasting peace by a free federation of nations. Beethoven (whose family came from a village near Louvain in Belgium) originally composed the *Eroica* symphony in honour of Napoleon and only changed his mind when the First Consul made himself Emperor. Goethe too was an admirer of Napoleon and of French *Kultur*, and he undoubtedly threw cold water on the War of Liberation. He told the Germans they were hoping in vain to make themselves into a nation, and that it would be better for them to shape themselves more freely into human beings, a thing that was in their power.[1] The Kaiser, who once made a speech at the University of Koenigsberg without mentioning Kant, would not have tolerated any of these men for a day. As a distinguished German

[1] "Zur Nation euch zu bilden, ihr hoffet es, Deutsche, vergebens.
Bildet, ihr könnt es, dafür freier zu Menschen euch aus."

writer on education observes, "It appears to us now-a-days a sorry reputation, that of having been a nation of thinkers and poets."[1] That, surely, is the true note.

V

I do not doubt that there is a good deal of prejudice and injustice in our young men's estimate of German education. I have said already that there is a real breach between it and the *Kultur* of the modern German State, and for that reason there is still a good deal of the older and better Germany left, if you know where to look for it. Few people, however, have time to do that. They must be content with a general impression, and the Germans of the present day certainly do not possess the art of making a good one. One thing at least is certain. It is many years now since any sort of inspiration has come to our young men from over the North Sea, and we shall find it worth while to keep that in view. There also exists a very decided feeling that we have gone to

[1] "Heute erscheint es uns ein leidiger Ruhm, eine Nation von Denkern und Dichtern gewesen zu sein." Dr. Max Wiesenthal, *Neue Jahrbücher für Pädagogik*, vol. x. (1902), p. 206.

absurd lengths in depreciating our own achievements in matters of this kind. That is our way, but it is apt to be misunderstood abroad. Foreigners do not know that, when we want to stir our countrymen up, we generally do so by telling them that they do things better in—whatever may be the fashionable country at the moment. It is by no means edifying to read German disquisitions on our intellectual inferiority, and our exclusive devotion to what they imagine we call 'Sport,'[1] and to find in the footnotes at the bottom of the page a string of references to English writers in support of the thesis. Take the case of Science, which is so much to the fore just now. It is a simple matter of fact that very few of the greatest scientific discoveries have been made by Germans. Let any one make a list of a score of men whom he regards as being in the very first rank of scientific discoverers, and he will be surprised to find how few of them are German, and the same holds good of the great inventors who have transformed modern life. What is true, as Professor Ostwald would tell us, is that the

[1] To be just to the Germans, they seem to have learnt the incorrect use of the word 'sport' for school games from the French.

Germans have 'organised' scientific work in a wonderful way. They have surveyed the whole field, with the result that the scientific workers of other nations, when they wish to know the actual state of any problem in which they are interested, have recourse to German publications for their information. In this way the Germans have done a most useful and meritorious work, and the strange thing is only that their vaunted 'method' has led them to so few discoveries of the first importance. The men who have revolutionised our view of the world have almost always been Frenchmen, Italians or Englishmen.[1]

VI

The average Englishman, however, when he speaks of the achievements of German Science, means something quite different from this. He is thinking of the extraordinary skill with which the Germans have applied the results of scientific

[1] Science was introduced into Prussia by the Huguenot refugees, and it is interesting to note how strong that influence remained. Dubois Reymond had not a drop of German blood in his veins, for his family belonged to Neuchâtel, and had never married outside the French Huguenot circle. The father of von Helmholtz was a German, but his mother was the daughter of a British officer and a Huguenot lady.

discovery to the needs of industry and commerce and he will probably refer to the classical example of the aniline dyes. That brings us back to the question of Higher education. It is certain that we have fallen behind the Germans in this respect, and the so-called practical man finds it convenient to blame our universities for it. That, I fear, is what gives force to the cry of the 'neglect of science' and makes some people desire a sweeping reconstruction of our educational system on what they suppose to be German lines. As I have said already, that idea is utterly abhorrent to the younger generation, and what is wanted is a little plain speaking on the subject. To begin with, we must remember that the advance of German industry in recent years is due to the fact that it was preceded by a long period of perfectly disinterested scientific research. If the Industrial Revolution had taken place in Germany as early as it did with us, it is very doubtful whether that would have been possible. It is certain that Science itself may be injured by being diverted from its proper business to the furtherance of material aims, and I am inclined to think that has happened in Germany of late years. I speak with hesitation on such a matter, but it does not seem to me that

German Science is quite what it was a generation ago. In the second place, it is altogether untrue that the German system is what it is represented to be. The German universities do not yoke themselves to the chariot-wheels of commerce and industry; it is just the other way. The German manufacturer or industrial leader is, for reasons which will appear, a good deal better educated than ours usually are, and he therefore knows the value of the expert, and is prepared to pay him well and give him a free hand. The very same thing might be done in this country if there was the slightest desire to do it. There is already far more trained scientific ability in our universities than anyone will make use of, and it could be increased if necessary, but it is not the business of the universities to relieve those who control our industries of the trouble and expense of employing scientific experts of their own. The war has shown what our laboratories are capable of when they are called upon, and there are some who are simple enough to believe they will go on at the same high pressure in time of peace in the interests of industrial production. They forget that what has been done in them for the last two years was done for the nation, and that it would be quite

another thing to put them at the disposal of individual manufacturers or limited companies. The men who have worked so hard during the war are not likely to go on finding out things in order to make a present of their discoveries to the directors of industrial concerns. In the language of the day, that is not a 'business proposition,' and it may become necessary for us to remember that the original meaning of *universitas* was 'trades-union.' The universities are partly supported by public moneys, but still more by private endowments. The expenditure of public moneys cannot be justified when the profits accrue mainly to individuals, as would be the case if such schemes were carried out. A socialist State might conceivably claim that universities supported by it should confine themselves to its service, but an industrial community organised as ours is can make no such demand. As to endowments, their purpose is to enable the sons of poor men to give themselves to the disinterested pursuit of knowledge, and they are none too great for the purpose. To divert them to that of paying for researches, the expense of which should properly fall on those who primarily profit by them, would be unpardonable, and I cannot believe it will be permitted.

What is wanted is really a better education for the leaders of commerce and industry, so that they may gain a rather wider outlook than they have at present.

VII

The truth is that the Prussians only understand these things better than we do, because they came late upon the scene and had to think them out seriously. They had learnt from their experience in other directions, and especially from that of their army, that a nation needs above all things an *élite* to do its highest work, and that an expert *élite* can be trained. From the beginning they organised their educational system in view of that, though the type of expert they first aimed at producing was of another kind. The same methods were applicable, however, in the sphere of commerce and industry as in other departments, and there was no difficulty in adapting them accordingly. We need such an *élite* just as much as the Germans do or more, but we are inclined to think it will be forthcoming without our having to trouble ourselves in the matter. That idea has arisen very largely because, in many departments of our public life we have, in fact, been furnished with an *élite*

by the Public Schools and the Universities of Oxford and Cambridge. I do not propose to criticise these institutions here. They have even more than their share of the national habit of self-depreciation, and may safely be left to criticise themselves. As, however, I have known something of them in the past, and have no private interest in them now, I think it only right to state my opinion for what it is worth, that there is enough *Wissenschaft* in Oxford and Cambridge to set up three or four German universities, and that the English Sixth Form boy is much superior, intellectually and otherwise, to the German *Primaner*, in spite of his being about two years younger on the average, a fact which those who compare the two do not as a rule think worthy of notice.[1] The older Universities and the Public Schools do much the best educational work that is done in this country to-day, and we should be very careful not to meddle rashly with institutions which are more and more becoming the admiration and envy of Europe and America. But this is not enough. For a variety of causes, of which their geographical situation is certainly the chief,

[1] The facts as to the ages of Prussian and English schoolboys are given below (pp. 96 and 166).

the older Universities and Public Schools have come to be more or less associated with a certain class, though to nothing like the extent that is commonly supposed. That class is neither the aristocracy nor the plutocracy. There are more sons of country parsons at Oxford than of peers or millionaires, and I hardly know how to describe the class I mean, unless we may call it the well bred class. It is the class which thinks it right to spend a disproportionate part of its income on the education of its sons, so that they may be fit for the service of the country. Of the still heavier sacrifices that class has made since August 1914 I do not speak, but it ought to be remembered in estimating its value to the nation. The older Universities and the Public Schools do not receive a penny of the nation's money, and the patriotism and public spirit they foster is a direct gain to the whole people. But, as I say, it is not enough. We cannot afford to draw our *élite* mainly from a single class, and it is certain that there is a large population, especially in the North of England, which is out of touch with the Public Schools and even with the older Universities. It is not that these institutions are exclusive. Oxford is the most democratic place in the world. No one

there asks who anyone is, and those who know Oxford best know that the result of such an inquiry, if made, would be very surprising to the public. But the fact remains that Oxford is in the southern half of England, and that so far limits its range.

In Scotland the situation is different. We have nothing that can be compared for a moment with the great educational institutions of the South, but we have more nearly solved the problem of drawing our *élite* from every class in the community, and it is therefore possible that our experience may be of use in England. The day-schools and the newer universities of the North of England are not unlike those of Scotland, and have indeed been modelled on them to some extent, so that we already have within our island a system which is of native growth, and only wants, as I believe, to be treated as an organic whole to give us something far better than Germany has ever had. The war has taught us that we are capable of organising our military resources when we are called upon to do so, and our first work in time of peace will be to organise our spiritual resources. It is a good deal more difficult to do, and it will take longer. As the French Minister of Public Instruction

put it, "munitions can be improvised, but not a soul."

VIII

It is, of course, just the appearance of superior organisation that fascinates so many people when they compare the Prussian system with our own, and it is true that we fall short in many ways. On the other hand, we must not forget that, in so far as education has been organised in view of the Prussian ideal of State *Kultur*, we cannot adopt its methods without danger. The whole *Kultur* of modern Germany is based on the organisation of society in fixed classes, each of them efficient in its sphere, but sharply separated from one another. It is possible for an English boy to make his way from the elementary school to Oxford, and it happens a good deal oftener than some people realise. In Prussia, on the other hand, there is a barrier between the elementary schools and those above them that can hardly be passed after the age of ten,[1] and those who do not pass it are marked off from the class above them by being compelled to serve in the army for two years. The Middle

[1] It has been done, of course, by exceptional men like Virchow and Paulsen.

schools[1] are able, indeed, to secure for their pupils the privilege of serving for only one year with the colours, but their pupils, who have only had six years of what we call Secondary schooling, are excluded by law from the universities, and therefore from the professions and the higher civil service. They are even excluded by growing custom from positions of authority and responsibility in commerce and industry. In this way the educational system has to act as a social sieve, and unless a certain stage has been reached by a certain age, a boy is classed for life. We shall see too that the process of selection is most rigorous at the early stages of education, and that it becomes laxer as we go higher in the scale. The result is a rigid system of class distinctions, which, from the point of view of the State, yields a high average of efficiency in each class, however little it may favour the development of exceptional individuals. That is German *Kultur*, and Ostwald is right in saying that its secret is organisation. But organisation, when the word is applied to human beings, means the treatment of them as tools or

[1] I use the term in the Prussian sense of schools which have only six classes. In South Germany, it includes what are called 'Higher schools' in Prussia.

instruments and not as persons, a treatment which is often necessary in war, for instance, but which is by no means what German Higher education was originally designed to promote. That is what I meant by saying that there is a real breach between Prussian *Kultur* and the Humanistic education Germany has inherited from the past. *Kultur* is really a spiritual Mechanism, and is incompatible with an education which puts Man above Machinery.

CHAPTER II

HUMANISM

'Ως χαρίεν ἐσθ' ἄνθρωπος, ὅταν ἄνθρωπος ᾖ.

MENANDER.

LET us look, then, at this other side. It has been pointed out that the existing system of Higher education is not a product of modern German *Kultur*, and that this explains the bitter attacks made on it by the Pangermanists. Its chief author, Wilhelm von Humboldt, was a Prussian, indeed, but he drew his inspiration from quite another region, and the Prussian Gymnasium was organised in the spirit of the New Humanism of Schiller and Goethe. The very name of Humanism sets it in sharp opposition to any form of mechanical *Kultur*. That of von Humboldt was based on antiquity, and especially Hellenic antiquity, and for the whole of the nineteenth century it is practically true to say that in Germany no one was admitted to higher study at the universities, and

consequently to the civil service or the professions or almost any position of authority and influence, unless he had completed the course of the Gymnasium, which means nine years of Latin and six years of Greek. It is worth while to remember that this was the education of the men who made the Empire and of the present generation of scientific teachers and investigators in Germany. Since the beginning of the twentieth century, indeed, the Gymnasium has no longer possessed this monopoly, but the two new types of Higher school which have been admitted to equal privileges are modelled on it, and may be said to be based on the modern humanities just as it is based on the ancient. In all three types of Higher school alike the curriculum includes, in addition to the language and literature of Germany, at least two languages and literatures other than German, one of which is studied for nine years and the other for six, and in the Realgymnasium as well as in the Gymnasium there is a third language and literature studied for seven years.[1] The most

[1] The compulsory languages are: In the Gymnasium—Latin (9 years), French (7 years), Greek (6 years); in the Realgymnasium—Latin (9 years), French (7 years), English (6 years); in the Oberrealschule—French (9 years), English (6 years).

characteristic feature of German Higher education is, in fact, that every boy who is destined for a position of authority and responsibility is bound to have a general education which is mainly humanistic in character, and that this education is prolonged till he is close on twenty. He is not allowed to specialise in any way till then. Those who have not enjoyed such an education, and have begun to specialise at an earlier age, are excluded, as I have said, by law from the professions and the civil service, and by custom from many other important positions.

I

Now it will be obvious that this implies a strong conviction that the highest work can only be done on the basis of a thorough and prolonged general education, which is not directed to the cultivation of any particular professional or other capacity, but simply to the development of the mind and character. That appears to be in direct contradiction to certain views which have attracted great attention in America of late years, and it seems necessary before we go further to consider this remarkable difference between German practice and American theory. To put the matter briefly,

we may say that it is now denied by some Americans that there can be such a thing as general training at all, since all training is the acquisition of habits, and habits are specific and not general. You cannot, for instance, we are told, train the Memory; for we have not one memory but a dozen or more, and no amount of training the one will improve the other. It follows that 'formal training' or discipline is a myth. This conclusion is based on a great variety of experimental tests and on psychological considerations of a general character. If it is right, it follows that our methods of education have been all wrong since the Renaissance, and that the German system in particular, which insists on formal training more than any other, is utterly mistaken. There is really no place left for humanistic education at all.

Now we shall see presently that what is called formal training by no means exhausts the meaning of humanistic education, but it is desirable to examine the new doctrine on that subject a little more closely before we go on to consider what further elements enter into it. Psychologically the American theory bases itself on a denial of the old 'faculty psychology.' You cannot train the Memory or the Will or any other supposed faculty

because these are merely hypostatised abstractions. That was exactly Plato's view, and he expressed it in the *Theaetetus* by saying that we must not regard ourselves as so many Trojan horses with a number of faculties (δυνάμεις) sitting inside us. We should naturally expect the next step in the argument to be that, since this is so, we must assume some principle of unity in us which co-ordinates the different senses and 'faculties,' and that the aim of education should be to train this so that it can do its work of judgement and comparison efficiently. That was Plato's inference,[1] and that is why he attached such unique importance to Mathematics as an educational instrument. It would seem, in fact, that the denial of the 'faculty psychology' should lead naturally to a keen sense of the importance of general education, but, on the contrary, we find that the comparatively limited number of faculties recognised by the old-fashioned psychology is replaced by a whole host of specific 'functions' or sub-faculties, if we may call them so. There are many memories and so on which are quite independent of one another. Plato's Trojan horse would have no room for them. Nothing is really gained by

[1] Plato, *Theaet.* 184b–185a

speaking of functions instead of faculties. No one who knew what he was talking about ever meant more by faculty (δύναμις) than the possibility of a function (ἐνέργεια), and a function has no independent existence any more than a faculty. It must be a function of something, and that something is best called the soul. It seems to me, then, that the psychology on which the new doctrine is based is open to the very same objections as the old faculty psychology, and in an even higher degree. The experimental basis of the theory also seems to me unsound. A great many of the experiments, and practically all of them that are in any way convincing, have to do with the power of learning things by heart, and it appears to be established, so far as it can be established in this way, that the cultivation of one particular memory has little appreciable effect upon the others. That, however, has hardly any bearing on education, in which learning things by heart plays a very small part after the earlier stages. What we mean by an educated man is not a man who can remember everything. On the contrary, what education aims at producing is an automatic power of selecting the right things to remember, and still more the right things to forget. The Austrian

socialist leader Pernerstoffer has defined education (*Bildung*) as "the sum of all we have forgotten," and his paradox at least shows a juster appreciation of what it really is than the American theories imply.

The point at issue is formulated thus by Professor Thorndike, the ablest advocate of the new view: "To what extent and how does improvement of one function alter others?" The answer he gives is this:

"A change in one function alters any other only in so far as the two functions have, as factors, identical elements. The change in the second function is in amount that due to the change in the elements common to it and the first."[1]

This way of putting the matter no doubt allows for a certain amount of transference of training from one mental function to another, and does not, for instance, contradict the fact that a man who has learnt one foreign language finds it easier to acquire another, but it represents such transference as a sort of by-product. But what if the 'identical factors' in human knowledge are just

[1] *Educational Psychology*, p. 80 (1st edition, 1903). The chapter is omitted in the 2nd edition (1910).

the most important things about it, and the very things it is the object of all real education to bring to consciousness? That again was Plato's view in the *Theaetetus*. He distinguished certain "identical factors" (*κοινά*) from the objects of the several senses and said they were those "the soul considers alone by itself" and not through the instrumentality of any special sense.[1] There are not, of course, many such identical factors which become explicit in the education of children, but the further we advance, the more numerous they are, and it is just the object of a general education to bring them to clear consciousness and so to multiply the points of contact between different mental functions as much as possible. It is only in this way that the undoubted facts of life can be explained. The further what we call a general education is carried, the more does the possibility of transference from one department to another increase, and it is probably at its highest at the close of a well ordered course of such training. After the war it will be possible to get some very interesting evidence on this point. The facts cannot be published yet, but most of us who have to do with undergraduates of twenty or twenty-one

[1] Plato, *Theaet.* 185a–186c.

are aware that many young men whose training had been mainly humanistic have been able to transfer their trained intelligence to the work of our chemical laboratories with singular success. They had acquired from their own work in other directions certain quite general capacities, and they simply applied the principles that had become a second nature to them to the task the nation required them to perform. I strongly suspect that, when all the facts about the war are known, the question of what is called 'transference' will present a very different appearance from that which it wears when we look chiefly to the case of children in the elementary schools.

On the other hand, experiments on adolescents or adults are often vitiated in a subtle way. You may to some extent get children to respond to your tests by representing them as a sort of game and thus enlisting their attention, but after a certain age people will not respond to anything of which they do not clearly see the purpose and in which they take no interest. The more educated a man is, the less he will care to exercise his powers in the memorisation of rows of letters or nonsense words. The fact that he fails in a test of this kind does not prove in the least that he could not pass

it triumphantly if he saw any good in it.[1] To take the case I have referred to already. Before the war, it is extremely probable that the young men I have in mind would have shown slowness or even incapacity in matters of chemistry, simply because they did not happen to be interested in them and they seemed irrelevant to their main purpose in life; but when the national need made such things of vital importance, their interest was roused and they were able to transfer their trained ability at once. In short, no experiments have any validity which do not take account of interest. When it can be shown that it is impossible to transfer ability from one function to another which is of equal or nearly equal interest to the subject of the experiment, and is seen by him to be of equal or nearly equal importance, we may give up the doctrine of general education, but at present there is nothing to suggest such a conclusion and experience of life points in quite the opposite direction. The only conclusion which appears to me to be warranted by the facts is that those subjects are of highest educational value

[1] If he knows the purpose of the test, he may be subconsciously affected by interest in its success or failure, which is the wrong interest, and therefore vitiates the result.

which have potentially the largest number of common factors with as many other subjects as possible. Whether, in a particular case, actual transference of trained ability from one department to another takes place depends entirely on the subject's sense of the importance of the other department and the interest he consequently takes in it.

II

But, as I have said, formal training or discipline by no means exhausts the meaning of humanistic education. That is based on the belief that there is such a thing as human excellence, and that this is something quite different from the excellence required in any particular calling. As Aristotle put it, it would be a strange thing if cobblers and carpenters had a specific function and a corresponding excellence, and man as such had none. The question is, in fact, whether there is such a thing as a good man, as well as a good cobbler or carpenter, or a good Englishman or Prussian. The Greek thinkers held very decidedly that there was,[1]

[1] It may be well to say here that the statement so often made in educational treatises, that this ideal was possible because Athenian society was an aristocracy based on slave labour, is quite unhistorical.

and it was the rediscovery of this ideal at the Renaissance that made the modern world possible. In the Middle Ages all education had been vocational, and it produced some remarkable results. It would be absurd to question the achievements of the twelfth and thirteenth centuries, especially in the arts, but there was always something lacking to them, and that was just the ideal of humanity, the ideal of a man as something greater than his vocation, which came to light again in the fifteenth century. If that ideal should cease to mould our educational systems, I have no doubt that we might continue to produce great things in many directions; but, with the loss of Humanism, we should lose everything that distinguishes our time from the Middle Ages. The only difference would be, so far as I can see, that the new Mediaevalism would be a good deal uglier than the old.

The advocates of specific training deal with considerations such as these in a very ingenious way. They say that the ideal of human excellence predominant in any particular age is always in reality a special type of man, and that therefore the humanist is just as much a specialist as anyone else. So far as this is anything more than a play with words, it only means that no age has yet succeeded

in realising completely what human excellence in all its fulness is. That, no doubt, is the case, but it cannot destroy the distinction between the aims of the two types of education. To train good cobblers and blacksmiths is an intelligible and worthy aim, and so it is to train good Englishmen and Prussians, but in both cases we are setting before us an end which is narrower than that of the education which aims first and foremost at producing the best type of man we can conceive, and it is the end rather than the performance that counts. If anyone cares to call humanistic education a form of specialisation, he is welcome to do so, but it is not a very instructive way of speaking. Ordinary people know quite well what is meant by an all round training directed to bringing out the possibilities of a man as a whole, and no amount of dialectics can obscure the fact that it is a different thing from training directed to a vocational end.

Most of us have to specialise sooner or later, so of course there is a vocational part in every complete education. The work of a Greek scholar is a specialism just as much as that of an engine-driver. All I am contending for is that the more intense the humanistic training which has prepared the

way for it, the higher will be the level of the specialised work when the time comes. That is just because, as Professor Thorndike puts it, there is a greater number of 'identical factors' which connect the specialism with human life as a whole. The teaching of the Greek scholar, as distinguished from his research work, will therefore aim primarily, not at producing more Greek scholars, but at producing men and citizens. What he is often tempted to regard as his higher work is really of far less importance.

I am dealing here with Higher education, but I should like to suggest that exactly the same principles hold good at every stage. As I understand Humanism, there is nothing absurd in saying that elementary education may be humanistic, and we should see to it that it is mainly humanistic till about the age of twelve. At that age it becomes possible to select the minority who ought, in the interests of the whole nation, to be passed on to the intermediate stage, and they should be transferred at once to the Secondary school. That transference of the *élite* makes it possible and justifiable to give a vocational turn to the remaining years of elementary education in the case of those who are to go no further, and that can be carried

on to the age of sixteen or seventeen in continuation schools and the like. In the same way, the course of the Secondary school should be kept strictly humanistic till about the age of seventeen, at which age it is possible to select those who are to be passed on to the higher stage of education. The majority who are to go no further should now enter on the vocational stage of their training, either in special classes at the High school or in technical and commercial schools. The *élite* should continue their humanistic education at College till they are about twenty-one, and then they are ready for the highest kind of vocational training, whether that takes the form of philological study or of a university course in Engineering or anything else. The three kinds of education are distinguished, in fact, by nothing else than the length of time that can be given to the humanistic part of the training, and it is important not to close the door too soon against promotion from one stage to the next. That can only be done by making sure that the *élite* which is to be promoted shall be transferred before the training of those who are to go no further has begun to take a vocational form. The Germans have always failed to secure this, and it seems as if the Americans were about to sacrifice

the advantage they now have in this respect. They are hampered by what they consider to be a democratic principle, that education should be identical for all up to the age of fourteen, and this is leading them to give up the truly democratic ideal of *la carrière ouverte aux talents* by condemning children to a vocation in their early years.[1]

III

I see, however, that I shall have to explain more fully what I mean by Humanism, if what I am saying is not to be misunderstood. It is still commonly believed that the early Humanists were interested only in the composition of Ciceronian prose and elegant Latin verses, and of course it is true that they cared greatly for these things. They regarded them, however, as means and not as ends. One of their first aims was the recovery of Greek science, and it was the work of the fifteenth century Humanists that made possible the scientific discoveries of the next two centuries. That, I think, throws light on the true function

[1] It is of great importance to note that the American arguments for vocational training derive nearly all their force from the assumption that everyone's elementary education lasts for eight years, from six to fourteen. They have very little application to our conditions in this country.

of Humanism in a scientific age like the present, and suggests that the quarrel between Science and the Humanities must be due to some misunderstanding.

In the Middle Ages all education was vocational. Latin was learnt after a fashion, indeed, but for purely utilitarian ends, like Esperanto to-day. The knowledge of Greek, which had served no utilitarian purpose since the separation of the Eastern and Western Churches, was allowed to become extinct. Real Latin was almost equally unknown. The Schools of Orléans, indeed, kept up the tradition of classical study for some time, but the final triumph of the Sorbonne made an end of that, and the reading of "the authors," that is of Latin literature, was considered beneath the dignity even of the *trivium*. Such studies were classed as *ludicra*, in contrast with the *seria*, the Seven Liberal Arts, which comprised the science of the time. In consequence of this, Science itself became more and more traditional, a thing of dead sums and catechisms. There were always a few men, to be sure, who knew that the key of ancient science had somehow been lost, and who even knew where to look for it. John of Salisbury and Roger Bacon, for instance, were

quite aware that the science of antiquity had been far in advance of anything taught in the mediaeval schools, and they knew too that the one thing necessary for its recovery was a revival of the knowledge of Greek. The attempt to get at Hellenic science through the Arabic failed, since Rome is the only natural highway between Greece and the West. Nor were their efforts to reach it directly much more successful. The gulf between Mediaeval and Hellenic thought was too wide to be bridged by such scanty knowledge of Greek as John of Salisbury could pick up in Calabria. The ancient way of looking at things had been forgotten, and some intermediary was required through which men might learn it again. That could only be the study of Latin, and to revive this was therefore the Humanists' first task. Before they could take another step they had to create afresh a fitting vehicle for ancient thought, which could not be expressed at all either in the barbarous Latin of the schools or in the national vernaculars.

In this the Humanists were instinctively guided by a very profound psychology. What had to be revived, if any progress was to be possible, was a way of thinking, and they were very clear about

the influence of language on thought. It is a perfectly sound doctrine that a way of thinking can best be reproduced by imitation of the manner in which it originally found expression. You can make yourself feel indignant by frowning,[1] and in the same way you may come to think like the ancients by trying to speak and write like the ancients. The Humanists held that the shortcomings of mediaeval thought were mainly due to the barbarous Latin it was expressed in, and they were perfectly right. The chief educational instrument of this period was therefore imitation, and it was just because the early Humanists had learned to imitate the language of antiquity that further progress was rendered possible.

IV

The Humanists did well, then, to begin with Latin; for Rome was the historical intermediary between Greece and the West. They were entirely successful in what they attempted, but their very success showed that their task was still unfinished. Latin pointed everywhere to some-

[1] This point has been much insisted on by the late Professor James. It is just the doctrine of μίμησις expounded in Plato's *Republic*.

thing beyond itself, to the perennial fount of all that makes antiquity still valuable to us. This was very early felt. Petrarch, whom Renan justly called "the first modern man," had a manuscript of Homer in his house and one containing certain dialogues of Plato, and he regretted bitterly his inability to read them. It is a popular error that the revival of Greek studies was due to the fall of Constantinople in 1453. Aurispa had brought the first Greek manuscript to Italy as early as 1423, and the immediate occasion for the revival of a first-hand knowledge of Greek was furnished by the unsuccessful negotiations for the reunion of the Eastern and Western Churches, and especially by the Council of Ferrara and Florence (1438–1442 A.D.). Two learned Greeks, Gemistos Plethon and Bessarion (afterwards a cardinal of the Roman Church), brought the knowledge of Plato to Italy, and the scales fell at once from the eyes of western Europe. It was this that made modern Science a possibility; for men learnt at last that, in certain very important respects, Aristotle and Ptolemy did not represent the genuine Greek tradition. The study of Plato pointed in quite another direction. So Greek scientific works were eagerly sought out and multiplied.

The thirteen books of Euclid were printed in Latin as early as 1482 and in Greek by 1533, and, what was still more important, Archimedes was printed in the original in 1544. Hippocrates appeared in Latin in 1525, and the next year in Greek. The results were soon seen. Copernicus tells us himself how he was led to think of the earth as a planet revolving round a central luminary by reading in a work ascribed to Plutarch that the Pythagoreans had taught this doctrine. He learnt too from Archimedes that Aristarchus of Samos had announced in the third century B.C. that the simplest hypothesis on which the apparently irregular motions of the planets could be accounted for was that the sun is the centre of the system and that the earth is a planet. He had further opened up a new view of the immensity of the universe by calling attention to the absence of observable parallax in the fixed stars. Galileo learnt in the same school. He was a Platonist, and this was what led him to attack Aristotle's doctrine of the 'incorruptibility of the heavens' by pointing to the new star in Sagittarius. Kepler too learnt much from the Greeks. It is true that, so far as we know, no Greek had ever suspected that the planetary orbits were other than circular,

but the disciples of Plato had worked out the theory of Conic Sections, so that Kepler had most of the necessary mathematical work ready to his hand. The same thing is true of Harvey, who was helped in his discovery of the circulation of the blood by his study of the Greek authorities. The bare fact of the circulation was quite well known to them and the phrase 'circulation of the blood' (*περίοδος αἵματος*) comes from Hippocrates. The Greeks, however, held an erroneous view of the arteries, and that prevented them from completing the theory. The credit of this belongs to Harvey alone, but he was certainly put on the track by his Greek teachers. A little later, Isaac Barrow exchanged the Professorship of Greek at Cambridge for the newly founded Lucasian Chair of Mathematics, from which he lectured on Archimedes and Apollonius of Perga. It was through him that the tradition of Greek higher mathematics reached his pupil Isaac Newton, whose theory of Fluxions, by the way, owes its name and something more to a Greek source. On the other hand, Francis Bacon despised the Greeks and continued to write in mediaeval Latin. He was therefore unable to think in the ancient way, with the result that he never discovered anything

himself and ignored or rejected the discoveries of Copernicus and Harvey. Science, in short, was the creation of the Greeks, and it was the revived knowledge of Greek science that gave rise to that of modern times.

It may be said, of course, that, even admitting all this, Greek science has done its work, and we need pay no more attention to it, and in a sense that is true, though it must always be of interest to know the origins of our knowledge. But there is a deeper sense in which it is untrue. The idea of disinterested scientific inquiry was perhaps the greatest gift of Hellas to mankind, and the Greeks were able to form this ideal just because they held that there is a human excellence which is other than and higher than the excellence of any particular craftsman or specialist. They held too that the highest and most human occupation was just scientific investigation, and it must surely be worth while to keep alive a knowledge of the writings in which this great idea was first proclaimed with a directness and simplicity we cannot attain to in these sophisticated times. It is a strange thing that the only languages which are still living after all these centuries should be called the 'dead languages.' No one troubles to call

Egyptian or Babylonian dead languages, yet they undoubtedly are so. Gothic is a dead language, and so are Old and Middle High German and 'Anglo-Saxon.' Even the French of the *Chanson de Roland* can hardly be said to live. Hebrew and Sanskrit have a certain vitality, and so have some other sacred languages, but it is of an esoteric kind. Latin and Greek alone, and above all Greek, seem to be ageless and deathless.[1] It is only because those who use the term have an uncomfortable feeling that they ought to be dead and are not that they trouble to call them dead. Greek at anyrate was never more alive than it is to-day.

But, while that is so, it is clear that Humanism is not in principle confined to the study of Greek and Latin. Every kind of education which has the same object as that we owe to the Humanists of the Renaissance is entitled to the name of humanistic. The only thing we have to ask is whether it is directed to the training of human excellence rather than to imparting a special proficiency of any kind. So far as the 'modern humanities,' for instance, have this end, there is

[1] I mean, of course, Greek of the great period. That of the Athenian newspapers really is a dead language, though quantities of it are printed every day.

no sort of reason why the adherent of the ancient should find fault with them. At most he is only entitled to point out that the literatures of such countries as France and Italy are not fully intelligible without a knowledge of the Graeco-Latin civilisation in which they are rooted. So far as they go, they can be used for the purposes of humanistic education, and they are more and more being treated in that spirit. The study of Science, too, for its own sake is emphatically humanistic. But we may go still further and say that even elementary education, in which no language other than English is used, may quite well be humanistic in spirit, so long as it is directed to bringing out the best it can from its pupils as human beings without any reference to the particular callings they may be intended to follow. It is very important, I think, that the humanistic character of the best elementary education should be fully recognised, and I believe it is just this ideal that is at the bottom of many of the most hopeful developments in this field at the present day. There is no class of pupils for whom it is more important that they should receive some purely human education than those who must necessarily begin their vocational training at an early age.

The others may make up for the want of it later, but for them it is the only chance, and those who would rob them of it deserve to have a mill-stone hung round their neck and to be sunk in the sea.

V

Elementary education is not, however, our present subject, and I have only mentioned it because I could not help saying a word for the children, whose right to be treated as human beings is now seriously threatened. What I have chiefly to insist on is that the great lesson we may learn from Hellas is just the folly of any estrangement between Science and Humanism. So far as that exists, it is doubtless a survival of the time when Humanism was mainly Latin in character; for it is certainly true that the Romans had no real interest in Science. To a certain extent this estrangement persisted in the nineteenth century because a one-sided classicism tended to lay too exclusive an emphasis on the artistic side of the Greek genius. That was natural in a period when the greatest works of Greek art were coming to be known for the first time, and when, it is not too much to say, Greek literature was first properly

understood. No one disputes the unique greatness of Greek art now; for most people can see it for themselves without special study, and the number of men and women who have some knowledge of Greek literature is probably greater to-day than it ever was before. That, however, has helped to propagate the radically false idea that the Greeks were a people who cared chiefly for Art, and took what is called an aesthetic view of life. It would lead me too far if I were to discuss this point fully, but I should like to point out that the Greeks had not even a word for Art. Their language, which is capable of expressing so many nice distinctions, has no means of distinguishing the activities of a Pheidias or a Praxiteles from those of a cobbler or a blacksmith. All are alike τέχναι, and in the same sense. Further, the art of sculpture, which seems to us characteristically Greek just because we now have so many magnificent specimens of it, is only mentioned in the most cursory and incidental way in the Greek writings of the classical period. So far as they go, we should never have been able to infer that there was anything remarkable about Greek sculpture, though we should know that sculptors were classed with other craftsmen and that they were

not regarded with the respect that is shown to artists at the present day. It looks as if the greatest art belonged to those times when men did not make art an end. It is rather the spontaneous outgrowth of ages which are great in other ways, and men talk least about it when it is at its best.

Now the Humanism of Schiller and Goethe, to which the Prussian Gymnasium owed its rise, was based on this somewhat one-sided interest in the aesthetic aspect of Greek civilisation, but of late years German Humanism has been shifting its ground a little. The study of Greek is no longer advocated on the ground that it furnishes us with a norm we shall do well to follow, but because modern civilisation is unintelligible without a knowledge of the Hellenic civilisation from which it is derived. Historicism, as it is called, has taken the place of Classicism. The chief representative of this tendency is Professor von Wilamowitz-Moellendorff, and it will be seen from what I have said that I regard it as having a certain amount of justification. Where the German humanists go wrong, as I think, is that they would introduce this idea into the school. It is, after all, the artistic side of Greek literature

that appeals most to the young, and it is far better for them to come under the spell of great personalities than to study economic history and *Kulturgeschichte*. That, however, is a minor matter from our present point of view. I have only referred to the subject to show how the kind of Humanism that characterised the early Renaissance is always reasserting itself. The best work that was being done in Greek learning before the war was in the study of the Greek medical writers. Now it is plain that even Humanism of this type is something quite alien to the spirit of modern German *Kultur*, and, so far as I can see, the future of Germany depends on which ideal is to prevail. If it should be that of *Kultur*, it will mean a relapse into barbarism. We too shall be called upon to make our choice between these two principles, and the future of our Nation and Empire depends on the choice we make. It is therefore no time for futile bickerings between Science and the Humanities. There is no real quarrel between them, and their interests are identical. The common enemies they have to contend with are Nationalism[1] and Vocationalism, which are quite

[1] Of course I do not mean by Nationalism respect for the principle of nationality. It is just the opposite.

as inconsistent with Science as they are with the Humanities. Indeed, the maintenance of Humanism is a vital interest of Science. It has never yet flourished apart from it, and I do not believe it ever can; for it is the humanistic principle alone that can justify disinterested scientific research. Men of science who are tempted to rest their claims on merely utilitarian grounds are really betraying their own cause.

Our French allies, who have a marvellous gift of disentangling the essential features of a complex situation, make no mistake about this. One has only to read the volumes of the *Revue des Deux Mondes* or the *Revue internationale de l'Enseignement* which have appeared since the war began to see that all the men who have the best right to speak for France—men like Boutroux, Lavisse and Bergson—are agreed that what their country is really fighting for is *la civilisation gréco-latine*. They know that, while the restoration of economic prosperity after the war is a matter of great importance, the restoration of *humanitas* to Europe is of still more vital moment, and they have come to the conclusion that one of the chief lessons taught by the war is the necessity of strengthening *l'éducation classique*. In fact that has been expressly

laid down in a circular issued by the Minister of Public Instruction.[1] If life is to be worth living for this generation and the next, there will be plenty of work for the humanist to do when the soldier has finished his.

[1] The circular is dated Sept. 10, 1915. It says: "La culture classique, d'autre part, doit rester l'objet d'une fervente étude, ne serait-ce que parce qu'elle a transmis à la pensée française la plupart des grandes idées pour lesquelles nous combattons. Et dans cette culture classique, on continuera d'employer, avec un soin jaloux, les méthodes françaises qui, après avoir donné a l'étude des lettres antiques le fondement scientifique essentiel, en font ressortir davantage la valeur esthétique et la valeur morale. N'est-ce pas, d'ailleurs, parce que l'antiquité a toujours été en France, non point seulement un objet de sèche érudition, comme de l'autre côté du Rhin, mais encore un sujet d'admiration et un guide de conduite, que la pensée antique a nourri l'âme française et que le grand conflit actuel est devenu le conflit de deux cultures inconciliables?"

CHAPTER III

HIGHER EDUCATION IN GERMANY

If we wish to understand this struggle between *Kultur* and Humanism, the first thing we have to do is to get an idea of what the German system of Higher education really is. Information on the subject is easily accessible,[1] though to judge from

[1] I am thinking chiefly of the *Special Reports on Educational Subjects* issued by the Board of Education. See especially vols. 9 and 20. There is a handy work by Prof. Lexis of Göttingen, which has been translated into something resembling English by Dr. G. J. Tamson under the title of *A General View of the History and Organisation of Public Education in the German Empire* (Berlin, 1904). It is an epitome of the larger work prepared by Lexis for the St. Louis Exposition. Matthew Arnold's book *Higher Schools and Universities in Germany* (first edition, 1868) is only of historical interest now. We are brought down to the end of the nineteenth century by a very able American work, J. E. Russell's *German Higher Schools* (1899), but even that is now antiquated. It was published at a rather unfortunate date; for most of the arrangements described in it were completely overturned the next year. The present Prussian

the extraordinary statements that appear from time to time in the press and elsewhere, few people know where to look for it. It will be best to limit ourselves to the system in force at the present time in Prussia, though it must always be remembered that statements which are true of Prussia do not necessarily hold good of the other states of the Empire. I shall not say much of the history of the system, though of course it cannot be fully understood without a knowledge of the process by which it came to be what it is. Historical explanations are apt, however, to confuse the student who is new to the subject, and are more in place after he has a clear idea of the contemporary facts. I shall therefore confine what I have to say to the Prussian system as it has existed since the beginning of the twentieth century, with only a few necessary hints as to the earlier stages.

To avoid misunderstanding, let me also repeat once more that I am here concerned with *Higher* education alone, that is to say, with the education

---

system dates only from the Royal Decree of 26th November, 1900. The chief authority on the historical development of German education is, of course, Paulsen, *German Education; Past and Present* (Eng. trans. 1907).

which aims at preparing an *élite* for the professions and the higher Civil Service (which includes a good deal more in Germany than it does with us) along with certain other callings which we should hardly put on the same level, but which are rightly held in Germany to require an intensive training of exactly the same kind. Elementary education presents problems of its own, and so does Intermediate, the education which prepares for an ordinary business career in a subordinate capacity. We have something to learn from Germany, both by way of example and of warning, in respect to these, but we are only concerned with them here in so far as they enter into relations of any kind with Higher education. I shall also have little to say about the German Universities and Technical High Schools, except where they come into contact with the Higher Schools. It is on these that the whole system depends.

The fundamental principles on which the Prussian system of Higher education rests are two in number—

1. *The aim of Higher education is to produce a body of specially trained experts for the service of the State.*

II. *The special training required for this purpose is only possible on the basis of a wide general education in which no specialisation is permitted.*

The training of those who are to serve the State is thus divided into two sharply contrasted periods, a period of general education (*allgemeine Bildung*), and a period of specialised study (*fachwissenschaftliche Bildung*). The general education required is of so wide a kind that the special training can rarely begin before the age of twenty, and it lasts till the age of twenty-five or twenty-six at least. This is the necessary effect of the arrangements I now proceed to describe.

I

No one is admitted to the University or to institutions of University rank unless he holds a Certificate of Maturity from a Higher School. The same condition applies to admission to the State Examinations held at the end of the university course for admission to the professions (e.g. *Law and Medicine*) *and the higher Civil Service* (*including the Church, the Magistracy and the higher ranks of the Teaching profession*), *and for such callings as Mining and Forestry.*

It is necessary to bear in mind the German use of the terms 'High School' and 'Higher School.'

A High School (*Hochschule*) is a University or an institution of University rank. The Technical High School at Charlottenburg, for instance, is not in the least what we should call a High School. On the other hand, the University of Berlin is a High School in the German sense. The conditions of admission to both institutions are broadly the same, and it is not as a rule possible to enter either before the age of twenty.

A Higher School (*Höhere Schule*) can only be defined as one which fulfils the conditions required by the State for admission to the Universities and to Technical, Commercial and other High Schools. It is better not to call the German Higher Schools Secondary Schools. The term is not used in Germany itself, and it means a different thing in every country where it is used, so that it only leads to confusion.[1] As a matter of fact, the

[1] In South Germany the schools which prepare for the universities are called *Mittelschulen*, 'Intermediate Schools,' a term which is applied in Prussia to schools which are higher than the elementary schools, but do not prepare for the universities. In some countries, as in Switzerland, that is also the meaning of the term Secondary Schools. They are what the French call Superior Primary Schools. It is probably too late in the day for us to get rid of the term Secondary education, but its ambiguity is a constant source of misunderstanding.

German Higher Schools combine the functions of our Secondary Schools and our Faculties of Arts.

There are now three types of Higher School with equal privileges (*Gleichberechtigung*)—

The *Gymnasium*, with both Latin and Greek.

The *Realgymnasium*, with Latin and no Greek.

The *Oberrealschule*, with neither Latin nor Greek.[1]

Each type of school has its curriculum (*Lehrplan*) fixed by the State, and it is the same for every boy in the school. There is no distinction like that between Classical and Modern Sides, except in some cases where two schools of different type are united in the same building under a common head. No boy is allowed to drop any subject in the curriculum. If a parent does not wish his son to take Latin or Greek, he must send him to an Oberrealschule. There is no place in a Gymnasium for boys who do not take both Latin and Greek, nor in an Oberrealschule for boys who do not take both English and French.

Difficulties of course arise when a boy shows aptitude for a career which requires a knowledge

[1] The present system of equal privilege dates only from 1901.

of some subject not included in the curriculum of his school. It becomes more and more difficult to transfer him to a school of another type as he advances in his course, since he will be behind the rest of his class in some subjects and may be far ahead of them in others, and it is not possible for him to be in one class in some subjects and another class in others. At the end of the course, the difficulty may be very acute. Greek, for instance, is required for the Church and Latin for the Law, and a pupil from an Oberrealschule who desires to enter upon either career has to get the additional subjects up by private study, by going to a crammer, or in the new Junior Classes at the University. It is clear that the pupil of the Gymnasium has much the widest choice of a career, since he must have a competent knowledge of Mathematics and Science and at least one Modern Language in addition to his Latin and Greek.[1] It is much easier, for instance, for him to enter a Technical High School than it is for a boy from the Oberrealschule to enter one of the professions

[1] French is compulsory and English optional, though in special circumstances a Gymnasium may make English compulsory and French optional. The fourth language is taken by a large number of boys.

or the higher Civil Service, though he is theoretically quite at liberty to do so. Not even the 'Allhighest' can make it possible to study the Civil Law without a knowledge of Latin, or Theology without a knowledge of Greek. It is for this reason, and not only for its social prestige, that the Gymnasia far outnumber the other types of school. The figures for 1910[1] were as follows—

Province.	*Gymnasia.*	*Realgymnasia.*	*Oberrealschulen.*
East Prussia	16	3	3
West Prussia	14	4	3
Pomerania	18	6	1
Posen	17	1	1
Silesia	40	9	6
Brandenburg	34	27	9
Berlin	11	7	3
Sachsen	27	9	13
Hannover	23	12	5
Schleswig-Holstein	9	4	5
Westphalia	25	11	6
Hessen-Nassau	21	5	9
Rhine Province	49	24	11
	304	122	75

In 1900 the number of Gymnasia was 295, that of Realgymnasia 87 and that of Oberrealschulen 37.

[1] I give in all cases the latest statistics I can find.

It appears, therefore, that the grant of equal privileges has increased the number of non-classical schools without diminishing the number of those which are purely classical.

Further, as the proportion of pupils who complete the course of the Gymnasium is very much higher than in the other types of school, it is still the case that the great majority of students in the Universities have had a classical education. In 1911–12 there were 46,653 students in all the Universities of the German Empire, and 34,205 of these, or 73% came from the Gymnasium. The distribution of students among the Faculties was as follows—

	Gymnasium.	*Real-gymnasium.*	*Ober-realschule.*
Protestant Theology	2,667	27	7
Catholic Theology .	1,763	0	0
Law . . .	8,344	1,998	
Medicine . .	8,181	1,765	699
Philosophy . .	13,294	4,568	3,374

It will be observed that the percentage of Gymnasial abiturients is lowest in the Philosophical Faculty (63%). That is entirely due to the fact that the majority of students of Modern Languages come from the modern schools. In

Law the percentage is 81 and in Medicine 77. It is worth while to observe that this means an amount of "compulsory Greek" of which we have no conception in this country. The great majority of students in the German universities have had no choice but to study Greek for six years at school.[1]

II

No specialisation is allowed in any type of Higher School. All alike teach literary and scientific subjects, but in all the bulk of the instruction is literary.

At this point it is necessary to clear up a matter of terminology, since confusion often arises from the different usage of the German word *Wissenschaft* and our word Science.

In popular language, Science is understood to mean such subjects as Physics and Chemistry, Zoology and Botany. Generally speaking, it is not intended to include Mathematics. The proper equivalent of Science in this loose way of speaking

[1] I am not concerned to defend the meagre remnants of compulsory Greek that exist in England (there are none in Scotland). It may take six months or a year to learn Greek enough to pass Responsions at Oxford. That is not enough to do any good, and it only causes irritation.

is in German *Naturwissenschaft*, which also includes Physics and Chemistry but not Mathematics. On the other hand, the term Natural Science with us is often confined to Zoology, Botany, etc., and excludes Physics and Chemistry.

When used without qualification, the German word *Wissenschaft* includes not only Mathematics and 'Science,' but also History and Philology. Philology, on the other hand, is not the study of language as such, which is vulgarly called Philology in English. That is known in Germany as *Sprachwissenschaft* or *Linguistik*, and is contrasted with *Philologie*, which is the systematic study of Literature, Ancient or Modern.

These differences of usage give rise to many mistakes. When, for instance, a German writer talks of *wissenschaftliche Studien*, we produce a wrong impression if we translate that by 'scientific studies,' as the dictionary tells us to do. He may very possibly be thinking of what we call Classics. On the other hand, when he speaks of *philologische Studien*, he does not mean what we call 'Comparative Philology' or even Historical Grammar, but the study of the literature of Greece and Rome on the one hand or of France and England on the other. What used to be called the quarrel between

Philology and Literature in this country is known as the quarrel between *Linguistik* and *Philologie* in Germany, where *Philologie* corresponds to Literature and not to 'Philology.'

The best way to show the importance assigned to different subjects in the Higher schools of Germany is to give the actual time-tables at present in force in Prussia. In the Gymnasia of the South German states rather more time is assigned to Classics.

The classes are numbered from *Sexta* (VI) the lowest, up to *Prima* (I) the highest. From *Tertia* (III) upwards there is a division into Upper and Lower, *Untertertia* (U III) and *Obertertia* (O III), and so forth. These are not really, however, divisions of the same class, but separate classes, each taking a whole year.

The figures show the number of periods assigned to each subject in a week. The brackets indicate that a certain latitude is allowed in the distribution of hours between the two subjects to which they are attached.

Optional subjects (such as English and Hebrew in the Gymnasium), which may be taken in additional hours, have been omitted for the sake of simplicity.

A. GYMNASIUM.

	VI.	V.	IV.	U. III.	O. III.	U. II.	O. II.	U. I.	O. I.	Totals.
Religion	3	2	2	2	2	2	2	2	2	19
German and Historical Narrative	3+1=4	2+1=3	3	2	2	3	3	3	3	26
Latin	8	8	8	8	8	7	7	7	7	68
Greek	...	...	...	6	6	6	6	6	6	36
French	...	...	4	2	2	3	3	3	3	20
History	...	...	2	2	2	2	3	3	3	17
Geography	2	2	2	1	1	1				9
Arithmetic and Mathematics	4	4	4	3	3	4	4	4	4	34
Natural Science	2	2	2	2	2	2	2	2	2	18
Writing	2	2	...	...	...	...	...	...	...	4
Drawing	...	2	2	2	2	...	...	...	...	8
Totals	25	25	29	30	30	30	30	30	30	259

An inspection of these tables will show clearly that, even in the most 'modern' type of school, the Oberrealschule, 'Science' is only allowed a comparatively small proportion of hours. It

B. REALGYMNASIUM.

	VI.	V.	IV.	U. III.	O. III.	U. II.	O. II.	U. I.	O. I.	Totals.
Religion	3	2	2	2	2	2	2	2	2	19
German and Historical Narrative	3 / 1 } 4	2 / 1 } 3	3	3	3	3	3	3	3	28
Latin	8	8	7	5	5	4	4	4	4	49
French	...	...	5	4	4	4	4	4	4	29
English	...	...	...	3	3	3	3	3	3	18
History	...	...	2	2	2	2	3	3	3	17
Geography	2	2	2	2	2	1				11
Arithmetic and Mathematics	4	4	4	5	5	5	5	5	5	42
Natural Science	2	2	2	2	2	4	5	5	5	29
Writing	2	2	...	...	...	...	...	...	...	4
Drawing	...	2	2	2	2	2	2	2	2	16
Totals	25	25	29	30	30	30	31	31	31	262

follows that no boy intended for the professions or for any kind of public service, even for such a position as that of a Mining Engineer, is allowed to make Science his chief subject till he is at least

C. OBERREALSCHULE.

	VI.	V.	IV.	U. III.	O. III.	U. II.	O. II.	U. I.	O. I.	Totals.
Religion	3	2	2	2	2	2	2	2	2	19
German and Historical Narrative	4 / 1 } 5	3 / 1 } 4	4	3	3	3	4	4	4	34
French	6	6	6	6	6	5 }	4 }	4 }	4 }	47
English	...	...	...	5	4	4 }	4 }	4 }	4 }	25
History	...	...	3	2	2	2	3	3	3	18
Geography	2	2	2	2	2	1	1	1	1	14
Mathematics	5	5	6	6	5	5	5	5	5	47
Natural Science	2	2	2	2	4	6	6	6	6	36
Writing	2	2	2	...	...	...	...	...	...	6
Drawing	...	2	2	2	2	2	2	2	2	16
Totals	25	25	29	30	30	30	31	31	31	262

in his nineteenth year and usually till he is older still.[1] I am not at present discussing whether this is right or wrong; I only wish to make the fact quite clear, as the very opposite is constantly asserted. I suspect that misunderstanding as to

[1] For the facts as to the age of Prussian schoolboys, see p. 96.

the meaning of the word *Wissenschaft* accounts for this to some extent. At any rate I was once faced in conversation with a statement from a German source that there were so many *wissenschaftliche Stunden* in the German Higher schools, and this was understood in perfect good faith to mean 'Science hours.'

III

As there are nine classes in every Higher school, and as promotion is strictly annual, the minimum curriculum is one of nine years.

Admission to *Sexta* is gained by an Entrance Examination (*Aufnahmeprüfung*). Every candidate must have completed his ninth year. As the school year runs from Easter to Easter, boys whose birthday falls after Easter may have to wait a good many months before they are eligible. In the largest schools, however, there are parallel classes (*coetus*, *Zöten*), one set running from Easter to Easter and the other from Michaelmas to Michaelmas, and that slightly reduces the average age in the great towns where such an arrangement exists.

The earliest stage of a boy's education, from the age of six to that of nine or ten, may be got

by four years' attendance at the Elementary school (*Volkschule*), or by three years' attendance at the Preparatory Department (*Vorschule*) of a Higher school, or from private tuition. Most of the Gymnasia of Prussia, and practically all those of Berlin, have Preparatory Departments attached to them, and they are generally preferred. The Gymnasium itself can only take a fixed number of entrants, and boys who are in the Preparatory Department naturally have the best chance.

Promotion from class to class (*Versetzung*) is strictly annual. No boy, however clever, can get a 'remove' to a higher class except at the end of the school year, and a boy who fails to secure promotion then loses a whole year, and lengthens his course by so much.

Promotion is determined by the mark (*Zensur*) which the boy attains in each subject, and in Prussia the final decision rests with the headmaster (*Direktor*). The marks awarded are five in number:

Very good,	*Sehr gut.*
Good,	*Gut.*
Satisfactory,	*Genügend.*
Defective,	*Mangelhaft.*
Unsatisfactory,	*Ungenügend.*

In general the mark *Satisfactory* (*genügena*) in all the obligatory scientific[1] subjects of the class is indispensable for promotion, but the principle of compensation is admitted to some extent. The mark *Defective* (*mangelhaft*) in one subject or another may be overlooked "if, in the judgement of the teachers, the personality and endeavour of the pupil guarantee his maturity on the whole (*Gesamtreife*)."[2] In practice, this rule seems to be generally interpreted by allowing a *Good* in one subject to cancel a *Defective* in another. In cases where compensation is allowed, a note may be added to the certificate to the effect that the boy will have to endeavour to remove his deficiencies in the coming year, otherwise his promotion to the next highest class will be stopped.[3]

Subject to this provision, a satisfactory performance in all subjects is required. A boy who does well in Mathematics, for instance, but badly

[1] The meaning of the term *wissenschaftlich* (scientific) has been explained above (p. 79). Here it is used to exclude subjects like Drawing and Gymnastics.

[2] It will be observed that compensation is only permitted, not prescribed.

[3] There has been much controversy as to the meaning of this. Is the boy only to 'endeavour' or is he to succeed?

in Classics, has to take the whole class over again, Mathematics included, and loses a year.

There are no published statistics as to the number of boys who are thus condemned to remain for another year in the same class (*Sitzenbleiben*). "All the Higher schools prefer to throw a curtain over this."[1] It is stated, however, by Bordein, who had several years' experience in the Ministry, that in Prussia the number of boys who fail to obtain promotion in all classes from VI to U II inclusive averages 25 %.[2] Generally speaking a boy who repeats the same class twice unsuccessfully has to leave the school.

IV

A boy who has been certified as 'ripe' for O II is exempted from the ordinary military service and has only to serve for one year as a volunteer.

The privilege of serving as a one year volunteer (*Einjähriger*) is very highly valued in Germany. It may be won by completing two-thirds of the curriculum of a Higher school with nine classes or (subject to certain restrictions which do not concern us here) by completing the whole curriculum

[1] Stürenberg, *Neue Jahrb. f. Päd.* xxiv. (1909), p. 564.
[2] *Monatschr. f. h. Sch.* 1908, p. 584.

of an Intermediate school with six classes. The result is that a large proportion of the pupils of the Higher schools leave when they have reached this stage. The statistics for Prussia in the year 1909 have been worked out by Dr. Wingerath, and the percentages of pupils in the three types of Higher school who contented themselves with the certificate for one year's service as a volunteer, and dropped out after U II, were as follows—

Gymnasium	23.4
Realgymnasium . . .	35.8
Oberrealschule . . .	52.8

If we also take into account the numbers who drop out at other stages, we find that the percentage of pupils who do not complete the nine years' course is very high. Dr. Wingerath gives the following percentages of pupils who begin in VI but drop out before O I—

Gymnasium	58.5
Realgymnasium . . .	80
Oberrealschule . . .	85

It will be seen that the process of elimination operates very rigorously at this stage.

In those circumstances it was felt that something should be done to secure that at least those who dropped out after completing U II should have

received what could be called a completed general education at that stage, so a Leaving Certificate Examination (*Abschlussprüfung*) was instituted for them in 1892, and exemption from the ordinary military service was made conditional on that.

There were, of course, obvious educational objections. The nine years' curriculum had hitherto been regarded as a unity, and the effect of the new examination was to suggest that it might be brought to a completion (*Abschluss*) after two-thirds of it had been taken. The three highest classes (the *Oberstufe*) were thus marked off as a sort of a continuation school for those who were going to the universities, while the lower and middle classes were combined into a sort of unity which, as it contained most of the boys, was bound to be considered as a thing by itself.

There was not much chance of such purely educational considerations being allowed to prevail, but the institution of this Leaving Certificate produced a result which had not been foreseen. The Royal Rescript of 26th November, 1900, contained this paragraph—

As the *Abschlussprüfung* has not fulfilled the expectations that were formed of it at its introduction, and, in particular,

instead of diminishing the immoderate rush of students to the university, has rather increased it, it is to be abolished as soon as possible.[1]

This requires explanation. We shall see later why the rush to the universities is regarded as a menace to society, and a little consideration will show how the *Abschlussprüfung* actually increased it. It was obviously a less serious matter for a boy to get his ordinary promotion to O II than to go in for an examination *ad hoc*. The Maturity Examination was still three years ahead, and he would then have two or three chances of trying for his Certificate. At the worst he could resort to cramming (*Einpauken*) by a coach, and he was quite aware that this is the line of least resistance. It was only human nature, then, that he should take it, and human nature is just the thing the Prussian government is apt to make mistakes about. The result was, of course, that described by the Emperor-King, and the *Abschlussprüfung* has therefore ceased to be. The only requirement for exemption from the ordinary military service

[1] "Da die Abschlussprüfung den bei ihrer Einführung gehegten Erwartungen nicht entsprochen und namentlich dem übermässigen Andrange zum Universitätsstudium eher Vorschub geleistet, als Einhalt getan hat, so ist dieselbe baldigst zu beseitigen."

is once more the simple teachers' certificate of ripeness for O II.[1] It will be seen that selection becomes less rigorous as we advance.

A much more satisfactory solution of the difficulty which undoubtedly exists is to be found in the development of the Middle schools which do not profess to prepare their pupils for the university at all. There is an examination for those who have completed the course of such schools which also entitles them to the Certificate for one year's military service as a volunteer, and it would be a far more healthy state of affairs if boys whose education is not to be carried beyond that stage were sent to these schools instead of to the Higher schools. Something has been done in this direction, at least in Berlin, but the consideration of that would take us beyond our present subject.

[1] It is rather amusing that Mr. J. E. Russell should have published a defence of the *Abschlussprüfung* in 1899, just a year before it was abolished (*Higher Schools in Germany*, p. 187). That is not his fault. The Prussians are always tinkering with their educational system, so that it is hardly safe to make any statements about it. They may be out of date before they are printed. I am assuming, however, that they are too busy otherwise just now to have time for what is one of their favourite pursuits in time of peace. The *Abschlussprüfung* was generally regarded as a mistake, and Saxony, for instance, never adopted it.

V

At the end of the curriculum comes the Maturity Examination (Reifeprüfung). The Certificate of Maturity (Reifezeugnis) is required for matriculation in the universities and for admission to the State Examination at the end of the university course.

The examining board (*Prüfungskommission*) consists of a Royal Commissary as president,[1] the Direktor and the teachers of the highest classes. The examination is both written and oral.

In the written examination a German essay and a mathematical paper consisting of four problems of different kinds are common to all types of school. Besides these there are—

(*a*) In the Gymnasium a translation from German into Latin and a translation from Greek into German.

(*b*) In the Realgymnasium a translation from Latin into German, and either an essay or translation from German into French, and a problem in Physics.

(*c*) In the Oberrealschule either a French essay and a translation into English or an English essay

[1] The municipality is also represented in the case of town schools.

and a translation into French, and a problem in Physics or Chemistry.

For the essays five and a half hours are allowed, for the mathematical problems five hours divided over two mornings, and for the other papers three hours each.

Each teacher submits three themes in his own subject and the Royal Commissary selects one of them.

The papers are marked in the first instance by the teachers and are then submitted to the whole board. Candidates who do very badly may be excluded from the oral examination, and candidates who distinguish themselves in the written examination may be dispensed from the oral. The principle of compensation is admitted subject to considerable restrictions.

The oral examination in all schools includes Religion, History and Mathematics. To these are added—

(*a*) In the Gymnasium, Latin, Greek and French (or English).

(*b*) In the Realgymnasium, Latin, French, English and Physics or Chemistry.

(*c*) In the Oberrealschule French, English, Physics and Chemistry.

Candidates who fail in this examination may try on two subsequent occasions without having to attend school in the interval. If they wish to try oftener, they must get special permission from the Provincial authority. The result of this is that the number of candidates who fail definitively is very small indeed. A distinguished educational authority writes, "It is not easy for an examiner to let a young man of twenty-five fail the third time, and so to annihilate all his plans for life."[1] No doubt that is an extreme case, but we shall do well to note at once the possibility of such an age in a candidate for a Leaving Certificate.

External candidates may apply to the Provincial authority to be admitted to the Maturity Examination of a Higher school. This provides for those who have been educated in private establishments, and also for abiturients of a Realgymnasium or Oberrealschule who require a Maturity Certificate of a different character from that of their own schools.

[1] The quotation is from E. Schwarz, *Neue Jahrb. f. Päd.* xxxii. (1913), p. 322. He gives the percentage of those who fail definitively in the Maturity Examination in Hessen as 0.2. Apparently any kind of maturity will do.

The Examination for the Certificate of Maturity confers no immediate privilege beyond that of entering a university or other High school, but it is also essential for those who wish to present themselves at any of the State Examinations five or six years afterwards. It is thus the only passport to the professions and the higher Civil Service, and that includes a great deal more than it does with us. There is also in Germany a growing tendency to require the Certificate of Maturity for entrance into professions for which a lower qualification used to be thought sufficient. Forty years ago, if one wished to be a veterinary surgeon, a certificate of ripeness for O II was sufficient (just as for the one year's military service); in 1878 a certificate of ripeness for U I was demanded, and now the Certificate of Maturity itself must be obtained. It is the same for dentists. And not only so, but it has become more and more the custom for banks and great commercial houses to make the same demand. The result is that a certificate originally intended to exclude unsuitable students from the universities has come to be essential for almost everyone who looks forward to anything higher than a subordinate employment.

The effect of these regulations is of course to raise the average age for leaving school very much. There is a good deal of confusion on this subject arising from the fact that German writers often speak of the 'normal age' when we should say the 'minimum age.'[1] It is obvious that a boy whose birthday comes exactly at the right time of the year, and who never misses his promotion, may conceivably get his Maturity Certificate when he is eighteen, but that is not the 'normal age' in the sense the words imply in English. H. Stürenberg has worked out the average of the Prussian abiturients in the different provinces, and his results for 1907-8 (the latest year he gives) are as follows—[2]

Westphalia . .	20.2	East Prussia. .	19.55
Rhine Province .	19.89	Sachsen . .	19.52
West Prussia .	19.86	Schleswig-Holstein	19.49
Posen . . .	19.85	Hessen Nassau .	19.43
Silesia . . .	19.75	Brandenburg .	19.42
Pomerania . .	19.67	Berlin. . .	19.15
Hannover . .	19.66		

The comparatively low average of Berlin seems to be due partly to the fact that there are both

[1] For instance, in the article on Examinations in the *Encyclopaedia Britannica* (11th edition), the usual age for taking the Maturity Examination is given as 17–18. It ought to be 19–20.

[2] *Neue Jahrb. f. Päd.* xxiv. (1909), p. 565.

Easter and Michaelmas entries in the large schools and partly to the fact that nearly every school has a Preparatory school (*Vorschule*) attached to it. In Westphalia, where the age is highest, there are no Preparatory schools. Boys must get their preparation in the Elementary school (*Volkschule*) or privately. The average age of the boys who left the Upper Sixth at Harrow just before the war was exactly two years below that of the Westphalian abiturients.[1]

VI

The Certificate of Maturity marks the close of a liberal education. It is no part of the functions of the university to carry that further.

It is important to observe that there is now nothing corresponding to our Faculties of Arts in the German universities. The Philosophical Faculty, which is sometimes supposed to do so, is an entirely different thing. It certainly includes students of Language and Literature, Mathematics and Natural Science, Philosophy and History, just like our Faculties of Arts, but these are all studying with some definite professional aim. In particular, hardly anyone studies Language or

[1] See below, p. 166.

Literature (*Philologie*) or Philosophy or History unless he is going to be a teacher either in a Higher school or in the university itself. The German student who is simply carrying on his studies for their own sake is a *rara avis* indeed. Most students from the Gymnasia matriculate at once in the Faculty of Law, which opens the way to the highest positions in the service of the State. The Faculties of Theology and Medicine are of course strictly professional too. A certain amount of philosophical study is required from candidates for the position of teacher in a Higher school. Otherwise the number of students taking philosophy is small.

The theory of the German university system is that the teachers are free to teach what they like (*Lehrfreiheit*) and the students to study what they like (*Lernfreiheit*), which is just the opposite theory to that of the Higher school. As a matter of fact, however, these liberties are rather illusory. It is true that the universities do not prescribe any particular course of study for their degrees, but a university degree is not what most students aim at, unless they propose to become university teachers themselves. What is really essential is the State Examination, which they must pass if

they wish to enter any of the professions or the higher Civil Service, and that in practice determines their course of study, and the university teacher has to prepare his students for the State Examination. It is, in fact, a necessary consequence of the vaunted liberty of the German universities that their degrees are not accepted as a professional qualification. No Doctor of Medicine, however high his scientific qualifications may be, is allowed to become even a village practitioner unless he has passed the State Examination, which implies a perfectly definite curriculum. On the other hand, a candidate who passes the State Examination need not have any qualification from the university, though he must have attended it.

As an illustration of the way in which a student's course is determined by the State Examination, it may be interesting to describe what is required of candidates for the office of teacher in a Higher school (*Oberlehrer*).

The minimum period of university study is three years, but most candidates take much more. The average is about five years and a half, and the percentage of students who passed with less than four years in 1911 was only 10.77.[1] During

[1] Klatt in *Deutscher Philologenblatt*, 1913, p. 154.

these years the student must devote himself to "well-ordered professional study," which is defined as "attendance on the lectures and exercises which are most essential for the departments in which he proposes to qualify, and also on several courses of lectures of a generally educative character."[1] The precise lectures which are regarded as essential in each department have not yet been officially defined, but students have to furnish evidence as to the lectures they have attended when they enter for the State Examination, so that it is not likely to be long before there is virtually a compulsory course, as there is already in Medicine, and practically in Theology and Law. It is worth noting that it is just because there is no prescribed course for degrees that there is a growing tendency to prescribe courses for the State Examination. The 'freedom of study' recognised in Germany has made it necessary for the State to take the business of Examination into its

[1] One of the requirements for admission to the State Examination is "der Nachweis eines mindesten dreijährigen ordnungsmässigen Berufstudiums an einer deutschen Staatsuniversität . . . Unter einem ordnungsmässigen Studium wird die Teilname an den für das Fachstudium wesentlichsten Vorlesungen und Übungen, sowie an mehreren Vorlesungen allgemein bildender Art verstanden."

own hands and to regulate the course of study for itself.

The examination itself consists of two parts, the General Examination (*allgemeine Prüfung*, *Kulturprüfung*) and the Special Examination (*Fachprüfung*). If the candidate desires it, these may be taken separately, but the interval between them must not be more than three months, and they must both fall in the same Semester.

The General Examination is only intended to test the candidate's general intelligence and his interest in subjects outside his own department. The subjects are Religion, Philosophy, Paedagogics and German.

The candidate has first of all to send in a German essay on a subject from one of these departments. The theme is given him by one of the examiners, who takes the candidate's wishes into account. This essay is written at home and several weeks are allowed for it. A candidate can only be rejected at this stage if the essay is so bad that it is useless for him to attempt the oral examination. In the oral examination the requirements are as follows—

(1) *Religion.* The candidate must show a knowledge of the contents and connexion of the

Scriptures, with a general view of the history of the Christian Church and the chief doctrines of his own confession.

(2) *Philosophy.* The candidate must show a knowledge of the leading facts in the history of Philosophy, with the chief doctrines of Logic and Psychology. He must also show that he has read one important philosophical treatise with understanding.

(3) *Paedagogics.* The candidate must show familiarity with the philosophical basis of Paedagogics and the most important facts in its development since the sixteenth century. He must also show that he has already some understanding of the problems of his future calling.

(4) *German.* The candidate must show that he is familiar with the general course of the development of German literature since the beginning of its flourishing period in the eighteenth century, and that he has read with understanding some of the more important works of this period since leaving school.

As we shall see, the questions asked in the General Examination are of an elementary character; the serious thing is the Special Examination. For this too a German essay must be sent in on a

subject taken from one of the candidate's departments. This may be replaced by a dissertation for the doctor's degree in the case of those candidates who are graduating.

Every candidate must take at least three subjects, and he must do well enough in at least one of them to get the qualification for teaching it in the highest class (*Primafakultas*). In practice, however, it is usually necessary to have two such first-class qualifications in cognate subjects in order to have a chance of getting an appointment of any importance. No one, for instance, will be appointed to teach Classics in a Gymnasium, nor even to teach Latin in a Realgymnasium, unless he has a qualification both in Greek and Latin. It is possible for a good candidate to secure three first-class qualifications or two of these and two half qualifications. No one can pass at all without one *Primafakultas*.[1] There are also one or two specified requirements for particular subjects. Candidates who wish a qualification to teach French or English must show that they know enough Latin to read Caesar with understanding

[1] The arrangements described by J. E. Russell (*Higher Schools in Germany*, p. 357) were abolished just before his book was published.

and those who wish a qualification for History must show that they are able to read historical sources both in Greek and Latin.

Additional teaching qualifications may be gained at a supplementary examination. If a candidate fails in any part of his oral examination, he is allowed one more chance before the same examining board. He can only present himself a third or a fourth time by special permission of the Minister.

It must be remembered that all this has nothing to do with university degrees. Except for those who wish to become teachers in a university, these are luxuries; the State Examination is the essential thing. It is said that not half of the teachers in the Higher schools of Prussia possess university degrees of any kind.[1]

So far, practically everything has been directed to making sure that the candidate knows the subjects he proposes to teach; for the Germans do

[1] J. E. Russell, *Higher Schools in Germany*, p. 358. The cost of taking a doctor's degree (including fees and the printing of the dissertation) is at least 500 m. (£25). It must be remembered that the degree of Doctor is the only one now conferred in Germany (except in Theology, where there are still Licentiates). The German title Dr. does not, therefore, imply nearly so much as it would in this country and in France. The Oxford or Cambridge B.A. with First Class Honours is more than equal to it.

not hold that 'Method' can make up for deficiencies in this respect. His practical training now begins and covers two years, the first of which is devoted to the Paedagogical Seminary attached to a Higher school (*Seminarjahr*) and the second to probation as a teacher (*Probejahr*), at the end of which his name may be entered on the list of teachers eligible for appointments. He may still have to wait some years before he gets one.[1]

I have thought it well to give a fairly minute account of the training of teachers of the Higher schools in order that the reader may see how very seriously the Prussian State takes its function of training an *élite*. The average length of the course from the day a young man gets his Certificate of Maturity to the day he completes his year of probation is seven years, to which must be added one year of military service as a volunteer. The time actually taken is often eight or nine years, and there is hardly any chance for any one to get a salaried post till he is thirty years old. It is just the same with Law and Medicine, and the only opening which presents itself at a slightly earlier age is in the Church.

[1] According to Mr. J. E. Russell (p. 373) the average period of waiting when he wrote was 5-6 years.

CHAPTER IV

THE SEAMY SIDE

In this chapter I propose to call attention to some of the weak points in the system I have described. It would of course be easy to draw up a formidable indictment on the basis of the attacks made on it in Prussia itself, but I do not intend to take that course. As I have indicated, these attacks are mainly of a political character, and have little to do with education. The invectives of Professor Ostwald, indeed, are of another kind, but they are too much of a piece with his scheme for the reorganisation of Europe[1] to be very instructive. It is true, I think, that he has put his finger on the weakest point of the system, the age to which pupils are kept at school, but that is probably an accident, since he accounts for it quite wrongly and the remedy he proposes would be worse than the disease. A better way of getting at the truth

[1] See p. 12.

seemed to be to study the utterances of Prussian schoolmasters who are attached to the system, but who know from their daily experience just where the shoe pinches. With that view I have read some scores of articles which have appeared since the last Reform in 1901, and characteristic extracts from these will be given in their proper place. The conclusion to which I have come is that neither the Higher schools nor the teachers are responsible for the evils I shall have to point out. These are partly due to the action of the Government, but still more to the faulty organisation of the German universities. I am aware that this is heresy, but I hope to prove my case.

Before I go any further, however, I wish to remind the reader of a simple paedagogical principle which is generally overlooked. It is that the question of *age* is fundamental, and supplies us with the chief test by which all educational arrangements are to be judged. What we have to ask in the first place is always what stage has been reached at a given age; for the pupil's age is a physiological fact with far-reaching psychological consequences which we ignore at our peril. No doubt it is true that one system of education may keep boys younger than another or may, on the

other hand, make them precocious ; but, if it produces either of these effects beyond a very narrow margin of variation from the norm, the result will be disastrous. There is, if we only could discover it, a stage of education appropriate for the boy of seventeen and another which is appropriate for the young man of twenty. Individuals of course differ considerably, and this will displace the appropriate stage relatively to them, but if we go too far on either side, we shall only produce something abnormal. We may be quite certain for instance that, if we treat a lad of seventeen as if he were a young man of twenty, we shall be quite as wrong in our treatment as if we treated the young man as a boy. I have pointed out already[1] that the Americans fail in their treatment of pupils between twelve and fourteen ; we shall see that the Germans fail in their treatment of those between eighteen and twenty.

I

The first point to be considered is the question of specialisation. It will be remembered that the Prussian system recognises specialisation of schools

[1] See p. 53.

to some extent, but does not permit specialisation of individual pupils within a given school, and we must, I think, admit it to be a very great advantage that every school should have a certain unity (*Einheitlichkeit*) with a distinctive character of its own (*Eigenart*). To secure that is the aim of the present Prussian arrangements, and it is obvious that it must reduce the purely administrative work of the headmaster considerably. That, however, is a minor matter. The important consideration is that, other things being equal, the work of a school is sure to reach a far higher level if it is shared in by the whole school alike. Boys being what they are, it is not easy for them to believe in the importance of what they are doing if they see that in fact it is not required of all their schoolfellows. From a schoolboy's point of view it is perfectly sound logic to argue that, since some boys may drop almost any subject, no subject can really be important. On the other hand, when the same work is required of the whole school, its necessity is less likely to be questioned. Or again, the breaking up of a school into departments may produce another effect which is almost as bad. Certain courses are pretty sure to be regarded as inferior to others, since boys are naturally snobs.

I remember vividly how we on the Classical side used to look down on the 'Moderns' in the High School of Edinburgh, and that cannot have been good either for them or for us.[1] If we had been in different schools, as we should have been in Germany, each school would have looked down on the other, which would not have mattered, seeing that it would have happened in any case. It is not a bad thing that a boy's natural loyalty to his school should also make him loyal to its curriculum. I think, therefore, that it would be well for us to consider whether, at least in the large towns, it would not be better to specialise the schools rather than the pupils. There is a great deal to be said in favour of the German view that unity of aim is essential to a school, and that, where it does not exist, you have no school, but only an institution in which a number of classes are held. It will be said that the unity which has

[1] It appears from a speech delivered by Geh. Justizrat Cassel in the Prussian Chamber of Deputies on April 4th, 1909, that, where two schools of a different type are combined under one head, there is a tendency to draft the best boys into the Gymnasium and keep them away from the Realschule. That is just what happens in the case of our Classical and Modern sides. The speech (a very instructive one) is reported in *Das humanistiche Gymnasium*, xx. (1909), p. 156.

disappeared from the work of our schools is recovered in the play, and that the Germans feel the need of a uniform curriculum so much just because they have no school games worth talking about. But is not that just why the games tend to become more and more the centre of the school life with us? Boys are not individualists, and if it is only in the school games that a real *esprit de corps* can manifest itself, these will be sure to command their chief allegiance. The spirit of the school takes refuge in the playing fields just because it can find no expression in our fractional 'sides' and 'divisions' and 'sets.'

On the other hand, when we consider that the average ages of the three highest classes in a Prussian Higher school are seventeen, eighteen and nineteen respectively, we shall be disposed to think that the Germans carry their objection to premature specialisation rather far, and all the more so if we remember that these classes already form an *élite*. A large number of the boys have left after securing their military privilege on completing their course in U II, and the number remaining in O I hardly ever exceeds thirty and is usually nearer twenty. The present system undoubtedly leads to hardships. Take the case, for

example, of a boy in O II of a Gymnasium who has shown a taste for Science and who proposes to adopt a career for which a good scientific training is important, say that of an engineer. As things are, he can only have two hours a week for Science, and his chance of being allowed to enter a Technical High school depends almost entirely on his performance in Latin and Greek at the Maturity Examination. Or take a young man (it is really rather absurd to speak of boys in this connexion) in the highest class of a Realgymnasium who wishes to become a functionary of the State (*Beamter*). He will have to study Law at the university, and for that a knowledge of Latin is essential. At present he can only have four hours Latin a week, and that is insufficient for the purpose. The most distressing case would be that of a young man in the highest class of an Oberrealschule who found that he had a vocation for the Church. I suppose that must happen sometimes.[1] He would have to begin Latin and Greek at the age of twenty, and obtain a certificate from a Gymnasium,[2] and the only consolation for him

[1] There were seven cases in 1911-12. See p. 77.

[2] This is still required for admission to the Theological Faculty, though to no other. In Scotland it appears to be

would be that the theological course is two or three years shorter than any other.

Now it shows the strength of the German objection to specialisation at school that proposals to allow a freer arrangement of studies in the three highest classes have been before the public for a century, and have received the support of the highest authorities, and that so far only isolated experiments have been made in this direction, at least in Prussia. Herder and F. A. Wolf had urged such a reform with the view of softening the transition from the school to the university.[1] Herbart, of course, was in favour of it, and so was Paulsen, and the Prussian Ministry has not been at all unsympathetic. In a paper on School Reform published in 1906[2] Dr. Boehm of Berlin writes as follows:

Up to *Untersekunda* inclusive all the pupils might study all the subjects substantially as at present in the approved elementary and systematic fashion, though of course with hints of a more scientific kind for the abler boys, rather with the view of awakening the desire for higher know-

thought at present that students can study New Testament Criticism with less knowledge of Greek than is required for a Leaving Certificate.

[1] See Budde in *Neue Jahrb.* xviii. (1906), p. 205.

[2] *Neue Jahrb.* xviii. (1906), p. 203.

ledge than with that of satisfying it. But at that point, when the *Banausen* [that is his name for the intending 'volunteers'!] have been happily eliminated, and the rest have recognised the direction in which their gifts and inclinations lie, there should be an intensive study either of Philology or of Mathematics and Science, only Religion, History and German remaining as compulsory subjects for all.

Experiments in this direction have even been made, and seem to have been successful. In the middle of last century that great scholar and teacher H. L. Ahrens established *Selekta* or more advanced divisions in particular subjects at the Gymnasium of Hannover, and quite recently Dr. Hornemann has been inspired by his example to do something of the same sort in the same town, with the natural result that he has been able to raise the standard of the work done very considerably.[1] He tells us that in his select class for Greek, he has been able to read the Greek

[1] See his article "Freiere Bewegung im Unterricht der Prima," *Neue Jahrb. f. Päd.* xviii. (1906), p. 440. So too Wessely (*ib.* xviii. p. 321) suggests the formation of classical and mathematical divisions in Prima. It would then, he says, be possible to read Thucydides and Plato with better results and even (!) to make Aeschylus and Terence accessible to the pupils (who are nineteen or twenty years old and have learnt Greek for five years and Latin for eight!).

Lyric Poets and Aeschylus, a most unusual thing in the Prussian Gymnasia of the present day. That, however, is an extra task on the part of both teacher and pupils, who are not relieved of any other part of their work to give time for it, and no account is taken of it in the Maturity Examination. The whole idea is too opposed to the Prussian spirit to find ready acceptance. In Saxony, on the other hand, bifurcation (*Gabelung*) has been allowed in the two highest classes since 1907, and has been adopted in many Gymnasia and Realgymnasia. In both types of school an almost equal number of pupils specialised in Philology and in Mathematics, a fact which shows how unfair it is to decide upon a boy's career when he is ten.

In Prussia the question is still further complicated by the terms of what is called the King's Peace of 1900. The friends of the Humanistic Gymnasium at that time supported the claims of the non-classical schools to equal privileges on the understanding that they would then be free to develop the classical character of their own schools. It was just the monopoly of the Gymnasium that had made it necessary to overload their programmes with a variety of subjects and

had led to overpressure. They had been compelled to ignore the precept *non multa sed multum.* The Royal decree, accordingly, laid it down expressly that the grant of equal privileges would enable each type of school "to accentuate its own peculiar character (*Eigenart*) more vigorously."[1] For instance, the number of hours allotted to Classics in the Gymnasium had been reduced in 1892, and it was now raised again at the expense of French. The proposal to allow greater freedom of study in the highest classes suggests, on the other hand, that the schools are to poach on one another's preserves. If the pupil of a Gymnasium is allowed to drop Greek, what becomes of the "peculiar character" which the Gymnasium was "to accentuate more vigorously"? On the other hand, certain champions of the Realschule, after at last securing equality of privilege for schools without Latin or Greek, have begun to agitate for the introduction of compulsory Latin and optional Greek into those very schools![2] It is clear that

[1] "Durch die grundsätzliche Anerkennung der Gleichwertigkeit der drei höheren Lehranstalten wird die Möglichkeit geboten, die Eigenart einer jeden kräftiger zu betonen."

[2] See *Res, von verba*, by Dr. W. Parow, of the Friedrich Werdersche Oberrealschule at Berlin. This is a bitter attack

the result of that would simply be to turn every Higher school in Prussia into a Realgymnasium, with a few hours of optional Greek attached to it, and the 'Allhighest' in person has condemned the Realgymnasia! "The Realgymnasia," he says, "are a half-and-half thing. With them only a half-and-half education is attained, and the whole affair gives half-and-halfness to the rest of life."[1] For once, I think, the Kaiser has hit the nail on the head, and Mommsen, who knew even more about Latin than he does, supported the elimination of Latin from the modern schools (*Realanstalten*) as a foreign body.[2] The Kaiser's idea is

---

on the Gymnasium, but the writer also considers the position of the Oberrealschule untenable (*unhaltbar*), and the above is the remedy he proposes.

[1] "Die Realgymnasien sind eine Halbheit, man erreicht mit ihnen nur Halbheit der Bildung, und das Ganze gibt Halbheit für das Leben nachher." This characteristic utterance is generally spoilt by being translated into "good English." The whole point is lost if we translate the effective third *Halbheit* by "divided interests" or anything of that kind.

[2] This was at the school conference of 1890. The principal champion of the Realgymnasium was Paulsen, who insisted that Latin was necessary for the study of science. I quite agree, but that does not make nine years of Latin necessary.

quite simple. He wishes to see frankly classical schools and frankly modern schools, and to let them do their best in competition with one another. He does not care for half-way houses.

The difficulty only arises at all, however, because of the supposed necessity of regulating the whole nine years' curriculum on the same principles. It is certainly a waste of time to study Latin for nine years, as is done in the Realgymnasia, without taking up Greek; but it is extremely useful for a boy to learn some Latin between the ages of ten and fifteen, even though he is never going to begin Greek at all, if only as a foundation for other studies, for instance that of modern languages. Indeed, I find it hard to see how any western European at least can be said to have had a higher education at all without as much Latin as that. On the other hand, the educational value of Latin disappears at a certain stage except for those who are receiving an integral classical education, and the reason is clear. After a certain point it ought to be treated as what it is, that is as a part, and not the most important part, of Graeco-Roman antiquity. The best Latin literature cannot be made fully intelligible except to those who know its original inspiration. I do not mean to

say there is nothing original in Latin literature, but who can feel what it is unless he knows Greek? I should even go so far as to say that the study of Latin apart from Greek is actually injurious beyond the point I have indicated, since it must tend to produce a one-sided and distorted image of the ancient Mediterranean civilisation on which our own is based, and to foster that most worthless of all ideals, the 'pseudo-classical.' The boy who reads Latin literature without knowing Greek will inevitably think of antiquity in terms of nymphs and shepherds, and will know nothing of what gives it real value even to-day. The nymphs and shepherds are all very well for those who know they are only an Alexandrian prettiness, but if they come to stand for Hellas and Rome, they are disastrous. Now the weak point of the Prussian school system is just that it makes it impossible to draw any distinction between the elementary knowledge of Latin which is good for everyone and the more advanced study which is only profitable for those who know Greek. In the case of the Greekless we are shut up by the official programme to the alternative of nine years of Latin or no Latin at all, and that is just because the schools have nine classes and there is

a dogma that no subject once begun must ever be dropped.[1]

II

The Prussian system of class promotion (*Versetzung*) will also strike most of us as needlessly mechanical, and we shall not be surprised to learn that its theoretical rigidity is compatible with a good deal of laxity in practice. It will be remembered that no boy, however gifted, can miss any of the nine classes, and that he can only be promoted at the end of the school year, failing which he has to wait till the year after. It therefore becomes very important for the teacher to get as many of the class as he can—three-fourths if possible—up to the mark, and the result is that he must direct his teaching mainly to "the lowest stratum of the middling pupils," as Dr. Joseph Petzoldt puts it. I do not doubt that there is some exaggeration, as his critics say, in his contention that the best boys are almost entirely neglected. No teacher who is more than a machine could do that. At the same time it is certainly true that this arrangement has been devised in the interests of

[1] The Reformgymnasium does not meet the difficulty, as will be shown later.

the middling pupils and that the best boys in the class must be "marking time" to a considerable extent till the others come up to them. They find the ordinary work of the class too easy for them, with the result that they either acquire habits of listlessness and inattention or else find some more or less undesirable outlet for their spare energies. It is characteristic of the German attitude to such questions that the solution of the problem which commends itself to Petzoldt is the institution of a new type of school, one for the "exceptionally gifted" (*hervorragend befähigte*). The objections to that are obvious and have been duly pointed out by other Prussian schoolmasters.[1] Such schools would tend to produce a harvest of disappointed prigs, who would go to swell the ranks of the 'intellectual proletariate,'[2] and the effect on the boys who were left behind would certainly be deplorable.

It will naturally be asked why the Prussians insist on this rigid system of annual promotion,

[1] The discussion to which this proposal gave rise was a singularly instructive one. See *Neue Jahrb. f. Päd.* xiv. (1904), p. 425 ff.; xxviii. (1911), p. 1 ff., p. 164 ff., p. 550 ff.; xxx. (1912), p. 21 ff.

[2] That was Bismarck's phrase. The Kaiser's word *Hungerkandidaten* is even more vigorous.

and the answer to that question will bring us to the source of all the evils from which the Higher schools are suffering. It was not always the rule. In former days the abler boys were promoted more rapidly. Bücheler, the great Latinist, was admitted to *Untersekunda* at the Gymnasium of Essen in 1848 when he was only eleven and a half years old, and it does not appear to have done him any harm. At the present day, in the most favourable circumstances, the minimum age would be fourteen, and the average age nearly sixteen. We are told too that it was not unusual for the best boys to remain voluntarily for one or two extra semesters in the highest class. Till lately it was possible, at any rate in the large schools which have both an Easter and a Michaelmas entrance, to save a boy half a year by promoting him from one set of parallel classes to the other, but that possibility has now been removed. The reason is that success in life depends on these promotions and that jealous parents object to other people's sons getting an unfair start. The situation is thus described by Paul Cauer, who is at once the ablest critic and the ablest defender of the Higher schools—

Anyone who enters a year later on his university studies is a year behind at his examination, at his first

appointment and at every subsequent promotion. And the chain extends backwards too; every delay at the Abiturient examination, every delay in promotion to *Prima*, *Sekunda*, *Tertia* signifies a loss for life that can be expressed in terms of money. Can one complain of provident parents who await the day of promotion every year in a state of anxious tension?[1]

That is the real trouble, as we shall see more and more. A curious light is thrown on it by a piece of history also narrated by Cauer. When a boy was removed from one school to another, he used to be examined with a view to ascertaining in what class he should be placed. That was inconvenient to officers who had often to change their garrison towns, and whose sons might lose a year in the race of life if the standard of their new school was higher than that of the one they had left. It was therefore decreed that all schools should be bound to admit newcomers to the precise place they held in their previous school!

The most mischievous institution of all, however, is the privilege of one year's service as a 'volunteer' attached to the completion of the course in U II and the certificate of ripeness for O II. As I have said, this is highly prized in the middle classes of society, and it gives rise to a class

[1] *Neue Jahrb. f. Päd.* xxx. (1912), p. 27.

distinction of a peculiarly odious kind. The 'volunteer' (*Freiwilliger*) is only a volunteer in the sense that he has to pay for his equipment and keep, but he does not have to live in barracks, which is a great point. What is more, after his service is over, he is eligible as an officer in the Reserve, which gives him an assured social position that nothing else can. The Prussians are supposed to be a military people, but they have a horror of their sons serving as common soldiers 'with the peasants' (*mit den Bauern*), and they will make great sacrifices to save them from that fate. The French, who really are a military nation, abolished this system some years ago, and now everyone has to serve alike, whether he is going to be a priest or a professor or anything else. In Prussia, on the other hand, to gain exemption from the ordinary military service of two years for their sons is the ambition of all parents. Mr. J. E. Russell writes of this system that it "distorts educational progress and gives an advantage to the enemies of the Fatherland."[1] He takes a far more favourable view of the whole Higher education of Prussia than I can share, and I therefore quote him as an impartial witness. He says further—

[1] *German Higher Schools*, p. 190.

The average schoolboy seems to consider schooling a necessary evil—something to be endured patiently, resolutely, thankfully, if only thereby he may escape social damnation.[1]

and again—

It is not the difference in length of service that makes the eager volunteer, nor yet the desire to spend a sum greater than is necessary for a year's attendance at the university; but above all considerations stands social rank. To have had ten years of successful schooling counts for nothing when reckoned with that higher distinction of belonging to a family that can afford the ten years of training and the fifteen hundred marks besides.[2]

We saw that the original function of the Prussian Higher schools was to train an *élite* for the service of the State; now we see how they have been turned into a machine for the gratification of the most paltry ambitions of a *parvenu* middle class. The one-year's voluntariate is supposed to have some military advantages in the way of keeping up the supply of Reserve officers, but it may very well be doubted whether it draws that supply

[1] *Ib.* p. 195.

[2] *Ib.* p. 212. The cost of serving for one year as a 'volunteer' is estimated at about 1500 marks (£75). The ten years referred to means, of course, four years in the Elementary school and six in the Higher school.

from the right quarters. We are sometimes supposed to be behind the Germans in matters of organisation, but even in a purely military matter like this there can surely be no hesitation in saying that our Officers' Training Corps afford an infinitely better solution of the problem. In every other respect the Prussian system of exemption seems to be utterly indefensible, since it is all a matter of a little spare cash.[1]

Another consequence of the system as it exists at present is the low esteem in which the Certificate of Maturity is held by those who are best qualified to judge of its value. I have pointed out how it has come to be required more and more as a passport to all sorts of careers (p. 95), and this has inevitably diverted it from its original purpose. That was to keep unqualified students out of the universities, a thing it certainly no longer does, as we shall see. Cauer says: "How low the Certificate of Maturity,—of intellectual

[1] It is true, of course, that in the Town Gymnasia of Berlin 10 per cent. of the places are free, but the real difficulty is not so much the fees as the time spent in schooling when the pupils might be earning something for themselves. Moreover, the municipality is continually raising the fees for obvious reasons, and that tells hardly on the lower middle classes who do not care to ask free places for their sons.

and scientific maturity for university study,—has sunk in general estimation already, is nowhere more clearly shown than in the proposal, which has been quite seriously made, to make the Leaving Certificate of a Training College for elementary teachers (*Lehrerseminar*) equivalent to it."[1] It has been made to serve all kinds of irrelevant purposes, with the inevitable result that it can no longer perform the function for which it was instituted.

The result is that the standard of university studies becomes lower every year. Young men who are quite unqualified slip through the test by the help of a crammer after one or two failures, and when they have once got their Maturity Certificates, the universities cannot refuse them. That is what is meant by the rush (*Zudrang*) to the Higher schools and universities which causes so much misgiving in Germany. In Prussia, von Dewitz tells us, the number of pupils in the Higher schools increased by forty per cent. in ten years, during which the population only increased by sixteen and a half per cent. In Germany as a whole the number of university students increased by eighty-six per cent. in the nineteen years from

[1] *Neue Jahrb. f. Päd.* xxxii. (1913), p. 184.

1889 to 1909, in which period the population of the Empire only increased by fifteen per cent.[1] If we go a little further back, the contrast is even more striking. The following table shows the percentage of students to every 100,000 of the population for the chief states of the Empire in 1879 and 1909—

	1879.	1909.
Prussia . . .	44.6	77.2
Bavaria . . .	39.9	76.6
Saxony . . .	47.3	74.7
Württemburg . .	44.3	76.3
Baden . . .	28.9	93.5
Hessen . . .	53.2	118

There is nothing that shows more clearly the difference between the German point of view and our own than the attitude of the Germans themselves on this subject. English writers are apt to quote statistics of this kind as a proof of the success of the German system and to envy the Germans for the numbers of those who receive a Higher education. That is because they are thinking mainly of the advantages of Higher

[1] These figures are given in *Neue Jahrb. f. Päd.* xxx. (1912), p. 92. They do not include students in Technical High Schools, Schools of Mining, Agriculture, Forestry, etc., who are about 40 per cent. of the number of students in the universities.

education in itself. The Germans, on the contrary, think first of the privileges attached to it, which cannot be widely shared. The State only requires a certain limited number of magistrates, doctors and so forth, and it is undesirable that Higher education should be extended in excess of the State's requirements. The idea that it may make better human beings, quite irrespective of what they are to be, has died out, and it is supposed that those who have received a Higher education will naturally consider themselves entitled to posts and salaries, which will not go round if the numbers become too great. Those who are disappointed will probably turn Social Democrats, and the Emperor has declared expressly that one of the chief functions of the Higher schools is to combat Socialism.[1]

It is hardly to be wondered at in these circumstances that the professors of the German universities should be unanimous in declaring that the students come to them insufficiently prepared even

[1] Just before the war all the professions were much overcrowded in Germany with the single exception of the Church. It was common for a young man who had passed his State Examination in Law to have to wait seven years for a subordinate appointment, and there were far too many qualified medical men for the population.

after nine years of a Higher school. A good many years ago Virchow stated in the Prussian Chamber of Deputies that his students were quite untrained in logical thinking. In 1912 Professor Hillebrandt of Breslau made a similar complaint, and he pointed out that the percentage of failures in the State Examinations was increasing to an alarming degree. It must be remembered that all the candidates possess a certificate that they have completed a course of at least nine years in a Higher school and that they have studied at the university for four or five years, so that a high proportion of failures is not to be looked for. Dr. Max Klatt gives the statistics for the State Examination for the position of teacher in a Higher school in 1912/13 and they are sufficiently striking. Out of 1426 candidates 816 passed and 610 failed. That is certainly an extraordinary proportion in all the circumstances. No doubt many of those who failed would ultimately pass. With the approval of the Minister they may try as many as four times, and then, just as we saw was the case with the Maturity Examination, the compassion of the examiners comes into play. One of the most eminent of them has declared in print that when he is faced by an oldish candidate who has

come to the end of what he can do, he cannot help saying to himself: "He can learn nothing more anyhow, and if he fails this time, it is all over with him." "Who among us," he asks, "is so free from weakness that he can throw the first stone at anyone who is accessible to such considerations in view of human misery? It may happen not only to softhearted and indulgent examiners, but even to earnest and conscientious men, that they can hold out no longer and prefer to decide to give an unhappy candidate the indispensable first class in one subject . . . rather than by their vote,—that of a mortal man,—to exclude a young man for ever from the calling he has chosen."[1] It is the old story. The more the requirements are raised on paper, the less they will be insisted upon in practice. The rigorousness of educational selection steadily abates as we advance.

The following notes taken by the same examiner in the General Examination for the office of teacher in a Higher school[2] will show better than anything else the depths to which a student

[1] P. Cauer in *Neue Jahrb. f. Päd.* xxxiv. (1913), pp. 37 and 38.

[2] *Neue Jahrb. f. Päd.* xxxii. (1913), p. 422.

who has spent four or five years in a German university after taking his Maturity Certificate, and who actually proposes to teach in a Higher school, is now capable of sinking.

... A candidate who produced a certificate that he had attended a course of lectures on the relations between Christianity and Natural Science, and who had read Haeckel's *Riddles of the Universe*, stated under examination that Haeckel was a "monotheist." He was corrected and admitted that he meant "monist," but when asked what was the opposite of a monist, he answered "A polytheist."

A candidate stated that at the university he had occupied himself with Goethe "as much as anything else" (*noch am meisten*) in the way of German literature. Asked what he had read, he said he had had a look at the Iphigenie (*die Iphigenie mal angesehen*). The plot was that Iphigenie saved her brother from the danger of execution. Another candidate thought Egmont and Götz were in verse and Tasso in prose. Another stated that the work he had studied was *The Elective Affinities*. Its central thought was that "it was all over with the happiness of life when the bonds of morality were loosened."

A candidate defined a tragedy as "where the hero dies." Another stated that the characteristic of Shakespeare was his strict observance of the three unities. Another (who was a historian) had never heard of Prince Harry or Falstaff, even by name.

One candidate poured forth biographical details about Heine, of which the examiner confesses he had never

dreamt. When, however, he was asked about Heine's poems, he tried to recite *Du bist wie eine Blume*, but could not get far. He could say nothing whatever about any other work of Heine.

The following notes were taken in the Philosophical part of the examination.[1]

A candidate who gave Leibniz's *Monadology* as the book he had read specially, said that Socrates was the representative of Greek natural science. His special department was Zoology and Botany, so he was asked for the fundamental thought of the doctrine of Evolution. He said it was that "species are distinct from one another."

Another candidate stated that he had occupied himself with the Empiricists and Rationalists. "The Rationalists emphasised the Understanding" or "They wished to acquire all knowledge with their Understanding." Asked what he thought of Empiricism and Rationalism, he thought they were both very strange, but he could not say which he thought the stranger of the two.

A candidate who professed Leibniz, and who gave quite a good account of his system, when asked what he really thought of it, eagerly replied "I am not convinced. I can't accept a miracle like the pre-established harmony!" He could not say, however, what Leibniz had tried to explain by means of it.

A candidate, who was a Doctor of Philosophy, said that Copernicus and Kepler "observed" that the earth went round the sun.

[1] *Neue Jahrb. f. Päd.* xxxii. (1913), p. 457.

It must be remembered that these candidates were not what we should call passmen, and that they were over twenty-four years old. I have heard strange things in examinations myself, but I hardly think we get so low as this even in a third class *viva* at Oxford.

CHAPTER V

HOME AND SCHOOL

Of course the Prussian schoolmasters know all this and deplore it. Dr. Boehm of Berlin, whom I have quoted already,[1] says it would follow as a natural consequence from the recent abolition of the Leaving Certificate (*Abschlussprüfung*) at the end of the sixth year that no boy should enter a Higher school with nine classes unless he has at least the intention of going on to the end, and unless his talents and circumstances in life justify him in proposing to do so. So far as he is personally concerned, Dr. Boehm is strongly in favour of the proposal made by several educational authorities not to grant the privilege of one year's service as a volunteer to pupils of the Higher schools until they get their Certificate of Maturity, except in exceptional circumstances. He says, however, that it is impossible in practice, and the

[1] See p. 113.

reason he gives is instructive. It is that, if it were adopted, at least half of the Higher schools in the large towns would have to be turned into Intermediate schools with a six years' curriculum, while the smaller towns would be in a sorry plight, seeing that they would not have enough pupils either for a Higher school or a Realschule. Observe what this means. The Higher school is maintained in many places by the municipality, and, where this is so, the ratepayers naturally wish that as much of the expense as possible should be covered by the fees. Now the only way in which pupils in sufficient numbers can be attracted to such schools is by the privileges attached to attendance on them. It is for the sake of these, and not for the sake of the education they give, that parents send their sons to the Higher schools, so it comes to this, that they are too expensive a luxury unless they attract a great many pupils who ought not to be in them at all. On the other hand, the parents regard the school mainly as an institution which can confer or withhold privileges. This, it need hardly be said, leads to strained relations between the school and the home.

I

In the first place, it is obviously the duty of the conscientious schoolmaster to the State, of which he is the servant, to eliminate unsuitable pupils at the earliest possible stage. He has to remember the dictum of the distinguished Russian scholar Zielinski that "an easy school is a social crime." Cauer puts the matter very bluntly. "It is the duty of the school," he says, "so far as in it lies, to take measures to prevent the ungifted sons of well-to-do families getting to the universities and so on the way towards leading positions."[1] Selection (*Auslese*) is one of the most important functions of the Higher school; it has to act as a sieve. Now it will be remembered that the all-important matter of promotion is entirely in the teachers' hands, and that they have the chief say in the Maturity Examination as well, so the parents are apt to look on the schoolmaster as the man who can ruin their sons' future career, and of course they credit him with a malignant desire to do so. There is thus a constant pressure on the school from outside, a pressure which is very difficult for a teacher to resist, and which is

[1] *Neue Jahrb. f. Päd.* xxiv. (1909), p. 342.

felt by the Direktor too, and even, as we shall see, by the Ministry. We are told by Dr. Lattmann that the Direktor is generally more soft-hearted than the form-master (*Ordinarius*). He is always inclined to promote a few more boys. It is the same thing, he tells us, at the Maturity Examination. "If the teacher of the subject hesitates between 'satisfactory' and 'unsatisfactory,' the Direktor is for 'satisfactory'; if the Direktor hesitates between 'satisfactory' and 'good,' the Government Inspector (*Schulrat*) is for 'good.'"[1] I sometimes think that, if our Scottish schoolmasters realised the pressure exercised by parents on those of Prussia, they would not be so anxious to assume the responsibility of granting Leaving Certificates with privileges attached to them. At present they are rather popular than otherwise; for it is a great convenience to be able to throw the blame of any untoward incident on a Department in London. The Prussian schoolmaster, on the other hand, is regarded as the natural enemy of the family.

I can best illustrate this by quoting one or two *cris du cœur* from distinguished German schoolmasters. These are not all Prussian; for the

[1] *Neue Jahrb. f. Päd.* x. (1902), p. 287.

system of privileges exists throughout Germany, and it produces the same results everywhere. The Government of Württemberg, for instance, has prohibited the sending of school reports at the end of the Michaelmas term, and the reason assigned is that the Christmas rejoicings of the family might be disturbed by the receipt of possibly unfavourable judgements on the sons! In the course of a discussion on promotion, Dr. Lattmann of Hamburg exclaims—

> It is only by repeated *Sitzenbleiben* of their sons that most parents can be brought to their senses. . It is just the parents, it is our regard for the public and our shrinking from severe judgements in these circles, that afford the only possible explanation of these excessively lenient promotions.[1]

Writing of the written examination done in the class (the *Extemporale*), Koeningsbeck says—

> When I imagined the disappointed faces of the parents, whose first question on their boy's return is of course about the result of the "frightful" *Extemporale*, when I pictured to myself the broken harmony of the midday meal, the tears of mothers and sons, the angry words of fathers against their own flesh and blood . . . and against the hated school, then I was inclined to fall into a bad temper myself with the "wicked" *Extemporale*.[2]

[1] *Neue Jahrb. f. Päd.* x. (1902), p. 288.
[2] *Ib.* xx. (1907), p. 226.

We are indebted to Carl Heinze of Cassel for the following glimpse into the domestic life of his townsmen—

Various parents of my exceedingly bad fifth class boys were kind enough to prepare me before the summer holidays to find that their lad would certainly do better in German presently, as soon as German essays had to be written, in fact. He could do that. I had not yet observed any trace of this capacity in his oral work, so that I very strongly suspected their chief hope lay in the home work. In this, even a weakish pupil has time and peace to show for once what he can do when he takes the trouble. Certainly he has; but the father and mother have time and peace too, and so have the elder brothers, and the uncles and aunts, or perhaps a friend of the family who knows something about the business. There are also books of essays in large numbers, edited by schoolmasters with ever so much paedagogic ability and provided with notes, etc. They contain much useful material. And lastly there is actually an essay-factory at Leipzig.[1]

II

The unfortunate schoolmaster who has to face the angry parents may be forgiven if he occasionally shrinks from the performance of his duty,

[1] *Neue Jahrb. f. Päd.* xxxii. (1900), p. 156. The *Aufsatzfabrik* referred to buys up old essays from students at the university and supplies them to schoolboys (addressed *Poste Restante*) for a small sum.

but it is a more serious matter when the Ministry allows itself to be intimidated, and that has actually happened. On the 21st of October, 1911, a ministerial decree regulating written examinations done in the classes (the so-called *Extemporale-Erlass*) fell like a bolt from the blue on the Prussian Higher schools. It provided that the date of these examinations should not be announced beforehand, in order to prevent special preparation for them as much as possible, and no doubt there is a good deal to be said in favour of that. The really remarkable Regulation which it introduced was, however, the following—

"If the teacher observes in correcting the papers that an appreciable portion—say a fourth—of the papers come out below the mark 'satisfactory,' he is to abstain from marking the whole set of papers."[1]

The examination, in fact, was to be treated as null and void, and what is more, the teacher is not allowed to hold another in place of it. One can see exactly what will happen. Once more the Prussian Ministry has shown its ignorance of

[1] "Bemerkt der Lehrer bei der Korrektur, dass ein erheblicher Teil, etwa ein Viertel, der Arbeiten geringer als genügend ausfallen, so hat er von der Zensierung dieser sämtlichen Arbeiten abzusehen."

human nature. In a class of forty it is certain there will be at least ten bright spirits who will try to arrange among themselves to vitiate every examination that may be held, and who will relish it all the more because they know quite well that every time an examination is not marked their teacher will be blamed for it.[1] The only people who suffer are just the teacher and the better boys in the class, who get no credit at all for their good work because 'say a fourth' of the class are idle or mischievous. Where so much depends on marks as in Germany, this is a crying injustice. Moreover, the Prussian Government has also failed to reckon with the human nature of the teacher. It is perfectly true that he may not appeal officially to the marks of an examination which has been invalidated by the unsatisfactory performance of 'say a fourth' of the class, but no ministerial decree can prevent his remembering these marks, or even jotting them down in a private note-book of his own. It would be very surprising if this was not the usual practice, and then, of course, the final judgement of the teacher will be affected by the results of the examina-

[1] The comic paper *Kladderadatsch* saw the point at once, but the Prussian government has always lacked humour.

tion whether these have been officially recorded or not.

The curious thing was that a general impression existed, even among schoolmasters, that there was a rule to the effect that in normal circumstances at least three-fourths of a class were to be promoted. Professor Hillebrandt of Breslau complained of this in the Prussian House of Lords (where the universities are represented) on May 21st, 1912, and he received the answer from the Minister that no such regulation existed. That was verbally true, of course, but it was true too that along with the decree about the *Extemporale*, there was issued an order that the percentages of promotions in every school were to be tabulated and reported to the Ministry. It was also true that, in cases where the number of 'unsatisfactory' marks was too high, the case was to be looked into and an explanatory note added. As Count Yorck von Wartenburg said, that must undoubtedly exercise a pressure on the teachers, who have pressure enough to resist already. The temptation to bring as many as possible up to the 'satisfactory' mark must be very strong, and that can always be done in the oral work, where you can get any result you like, except in desperate cases. It is

also human to say to oneself that a boy will have to be stopped sooner or later, but that the business had better be left to the master of the class above. It is further to be observed that no inquiry is required, and no report with explanatory notes has to be sent in, when the percentage of promotions is abnormally high. The suggestion is obvious.

III

Reinhardt, the originator of the Reform-gymnasium at Frankfurt, who is now at the Ministry, has published a pamphlet in which he defends the much discussed *Extemporale* Decree, and it contains one very significant sentence. He tells us how "the pupils before an *Extemporale* day had to work far into the night under the compulsion of anxious and embittered parents."[1] That is just the point, but it would surely be better to remove the incentive to parental ambition by sweeping away the system of privileges than to lower the standard of national education by tinkering with the symptoms of a morbid social condition.

[1] K. Reinhardt, *Die schriftlichen Arbeiten in den preussischen höheren Lehranstalten*, Berlin, 1912. For the sentence quoted, see p. 34.

As is well known, the number of suicides among boys from ten to twenty years old has increased of late years in Prussia in the most alarming way, and it is usual to say that this is the fault of the school, which works them too hard. I do not believe for a moment that this is true. The work required of Prussian schoolboys is not, so far as I can judge, particularly hard. In the department I know most about, that of Classics, it is not a bit harder than in our own schools. Not to speak of Greek and Latin verses, they have no Greek prose to do and Latin prose is reduced to a minimum. The amount of reading overtaken in the nine years course of Latin and the six years of Greek would not strike any English or Scottish schoolmaster as excessive and, as a matter of fact, it is less than we manage to get through in the time in this country. So far as I can see, it is the same in other departments. There is nothing in the Prussian Higher school as such to make any boy want to commit suicide. What drives so many to it is, I feel sure, the nervous tension produced by the eagerness with which every examination and every promotion is waited for at home. The boy is made to feel that his whole future life depends on these petty successes or failures, and he knows that he

will be considered a disgrace to his family if he has to serve two years with the colours as a common soldier. It is the Home and not the School that drives the wretched boys to seek relief in death.

IV

On the other hand, the parents might justly complain of the State for forcing them to take up this attitude. All its educational arrangements have been framed solely in its own interests. It is determined to secure an *élite* for its service, and it is quite indifferent to the number of lives it may ruin in the process of selecting it. In particular, these arrangements force parents to make up their minds whether their sons are to have a higher education or not at a time when they are far too young for anyone to tell whether they are likely to profit by it. As a celebrated doctor complained at an educational conference in Berlin, he has to decide whether to give his son a higher education, and what type of higher education to give him, at a time when the boy has not quite made up his mind whether to be a general or a tramway conductor. It must be remembered that a mistake made at this point cannot be rectified later. There is no thoroughfare from the Elementary school to

the Higher school after the age of ten or eleven,[1] and the Maturity Certificate of a Higher school is the only passport to the professions or the public service, and even to many positions of responsibility and authority in commerce and industry. It is natural, then, for parents to allow their son the benefit of the doubt if they can possibly afford to do it, so that they may not have to reproach themselves for the rest of their lives that they had not given him a fair chance. So they send him to a Higher school, and having done so they cannot face the humiliation of his failure. If anything goes wrong, they blame the school, which is unjust, but they have a real grievance all the same. The Social Democrats have discovered its true source, which is just the system of privileges attached to the Certificate of Maturity, and it is conceivable that, in some of the South German States, where there is a nearer approach to popular government than in Prussia, they may some day be able to sweep these away, in which case a very curious situation would arise; for it would become possible for young Prussians to naturalise themselves in

[1] If a boy leaves the *Volkschule* at the age of 14, he can only enter *Sexta* of a Higher school, since he knows no foreign language, and this means that he will be 23 *at least* before he can get a Leaving Certificate.

these States, and to enter their universities, though they were excluded from those of Prussia. It would be difficult to maintain such a situation for long.[1]

V

Various expedients have been suggested to obviate the necessity of making so early a choice as must be made under the present system, but the only one we need consider is the Reformgymnasium inaugurated by Reinhardt at Frankfurt.[2]

[1] The possibilities of the case are illustrated by an article in the *Hochschul-Nachrichten* for March, 1904. By a convention signed in 1899, the German States agreed to recognise the privileges attached to Maturity Certificates in the State to which the candidate belonged and only those. It followed that, when Prussia and Württemberg gave equal privileges to the abiturients of the Realgymnasium, such abiturients from Prussia and Württemberg became free to study what they pleased in any German university, whereas abiturients of the Realgymnasium from Saxony, Baden and Hessen, could not study Law or Medicine either in their own countries or in Prussia. The result was that certain young Saxons and Hessians became naturalised Prussians in order to acquire the right to study in the Saxon university of Leipzig or the Hessian university of Giessen!

[2] The other forms of *Einheitsschule* which have been proposed involve a political revolution which would destroy the whole fabric of the German educational system. Till this revolution has taken place, it would be a waste of time for us to consider them.

The essential feature of his scheme is that Latin is put off till the fourth year and Greek to the sixth, French taking the place of Latin in the first three years. It will be observed that this does not attempt in any way to solve the problem of co-ordinating the Higher school with the Elementary school (*Volkschule*); for it still remains necessary for a boy to begin his Higher school course when he is about ten. All the Reformgymnasium can do for the hesitating parent is to postpone the time when he must make up his mind between the classical and the purely modern school, in which no Latin at all is taught. It would not even be possible to transfer a boy from a Reformgymnasium to a Realgymnasium after three years, unless, indeed, it was a Reformrealgymnasium, which also postponed Latin till the fourth year. No doubt, however, it affords a considerable relief by making a final decision unnecessary till the boy is about thirteen. Now it must not be supposed that the Reformgymnasium is less of a classical school than the "unreformed" Gymnasium. On the contrary, if the classical languages are postponed they are studied all the more intensively once they are begun, and the boys in the upper classes of the Reformgymnasium have more hours

of Latin and Greek and fewer hours of Mathematics and History in the week than those of the ordinary Humanistic Gymnasium.[1] It is also necessary to point out that the Reformgymnasium has nothing to do with what are called the 'reformed' methods of teaching languages which put grammatical teaching in the background. The whole system, indeed, is only made possible by rigorous teaching of grammar from the first, the only difference being that the necessary grammatical notions are derived from the German language instead of from the Latin. The French work is hardly so important in this respect; for French is an analytical language, in a sense that German is not, and is so far less serviceable as an introduction to Latin. On the other hand, the French teaching introduces a good deal of vocabulary which is properly Latin, and which, it must be remembered, is not so familiar to begin with to the German boy as it is to the English. An

[1] In Lower and Upper *Tertia* the Reformgymnasium has 10 hours Latin a week, as compared with 8 in the ordinary Gymnasium, and 8 hours in the four highest classes as compared with 7. Greek has 8 hours a week throughout, as compared with 6. On the other hand, there are only 3 hours of Mathematics as compared with 4, and 2 hours of History as compared with 3.

English boy who learns for the first time that *virtus* means 'virtue' is not likely to forget it, and the German boy who already knows the French *vertu* is in that way put on the same level. It is not the same with the German boy who begins with Latin and has to remember that *virtus* means *Tugend.*

These remarks suggest a very important consideration which is not strictly relevant to our present purpose, but may best be referred to here. There have been suggestions that we might find a solution of some of our own difficulties in Reinhardt's system, and the idea is at first sight attractive. There is, however, a very serious objection to it which has been admirably discussed by Mr. J. W. Headlam.[1] The German boy gets his elementary grammatical training from his own highly inflected speech, but there is nothing of the kind on which we can build in English, except a few pronouns, and the attempt to teach these things through our own language would lead inevitably to a very artificial treatment of English grammar. It is certain, for instance, that 'him'

[1] Board of Education, *Special Reports on Educational Subjects*, vol. 20, pp. 56 ff. This paper should be studied by every classical teacher. It is a most important contribution to the study of higher education.

in *Give him a book* is dative, and that 'him' in *I teach him grammar* is accusative, and it follows that if you substitute 'Dick' or 'Harry' in these sentences they must be in the same case as the pronouns which represent them. That, however, is far too difficult for boys of ten, and they find it simpler to understand the point in an inflectional language like Latin. It would be a deplorable thing if the teaching of English grammar should be spoilt by the necessity of using it to prepare for Latin grammar, as it would have to be if we were to adopt Reinhardt's system here. On the other hand, the point can be explained in five minutes to a boy who has done Latin for a year if anyone thinks it worth while to do so. Reinhardt in fact has the great advantage of starting from a far less highly developed language, which has retained most of the original inflections. A German boy knows all about accusative, genitive and dative from his own language, and has only the ablative to add when he comes to Latin. The subjunctive mood and the distinction between attribute and predicate are familiar to him before he begins any foreign language at all. I feel sure that Reinhardt would say that all this is essential to his system, and that he would not regard it as practicable in

this country. What we have to do is something quite different. We have to familiarise our pupils with the very notion of an inflection, which is all but unknown to them, and the earlier that is done the better. These things ought to be taught at an age when the memory is strong and the reasoning powers undeveloped. Children love to learn things by heart, whether they understand them or not. Their counting-out rhymes are a sufficient proof of that, and these should be our guide in such matters. On the other hand, they resent, and quite rightly, all appeals to their reasoning powers. That is why language teaching is best begun before the age of twelve.

What we are discussing just now, however, is how far Reinhardt's Reformgymnasium meets the difficulties of the Prussian school system. It is quite possible that he has discovered a better way of teaching Classics, at least to German boys. Opinions differ about that, but the Goethe Gymnasium at Frankfurt did just as well, and for all I know, still does just as well, in the Maturity Examination as any other Gymnasium. Nevertheless the system is a topsy-turvy one. What is wanted, for reasons I have already stated,[1] is not a

[1] See p 118 ff.

school where Latin may be postponed, but a school where it may be practically dropped altogether at a certain stage. The Reformgymnasium gives a lad no Latin just at the time he would be all the better of it, and he has consequently to do a great deal more Latin and Greek later on, with the inevitable result that other subjects are cut down. If, on the other hand, he does not go on with the Reformgymnasium course, he will be transferred either to an Oberrealschule, in which case he will never learn even the elements of Latin, or to a Reformrealgymnasium,[1] in which case he will have to do Latin for six years after all, but at the wrong age. The real solution would surely be, not a school with a "Latinless foundation" (*Lateinloser Unterbau*), but one with a Latin foundation which might have buildings of various kinds erected on it afterwards, whether classical or modern or scientific. Of course that would not facilitate the transition from the Elementary school to the Higher school, but neither does Reinhardt's scheme, since it too begins a foreign language in *Sexta*. If once the superstition could be got rid of that no subject which has once been begun

[1] He could not be transferred to an ordinary Realgymnasium; for he would be three years behind in his Latin.

can be dropped till the pupil is close on twenty, the problem would not arise, and the Reformgymnasium would be quite unnecessary.

The fact is that it would probably never have been thought of but for the question of the privileges attached to attendance on the Higher schools. At the time it was started the monopoly of the Gymnasium was still almost intact, and it therefore seemed necessary to end up with the same results as the Gymnasium even though one began in a different way. The grant of equal privileges to the three types of Higher school has really cut the ground from under the Reformgymnasium. That shows better than anything else where the weakness of the whole system lies. School curricula are determined by the privileges attached to them and not on educational grounds, and that is the universal attitude on the subject. Parents send their sons to a particular school, not because they desire them to have the benefit of the kind of education it gives, but because it is the only way in which they can make sure of their occupying a social position as good or better than their own. That leads to a state of nervous tension which spoils the home as an educational influence and imperils the mental and bodily health of the boys.

It also hinders the schools in the discharge of their duty. It would require the most loyal backing on the part of the educational authorities to enable the teachers to withstand the demands of susceptible parents, and they do not get that backing, but just the opposite. The system suited Prussia well enough when it was a kind of Sparta, but it breaks down completely, just as the Spartan system did, as soon as the pursuit of wealth and position became of the first importance.[1] One gets the impression that the Prussian Higher schools would be practically emptied if the system of privileges were abolished, and that is surely enough to suggest grave doubts as to the soundness of the foundations they now rest on. These are certainly quite different from the foundations on which they were based by Wilhelm von Humboldt little more than a century ago.

[1] That is to say, when Timocracy gave way to Oligarchy. See p. 18.

CHAPTER VI

SCHOOL AND UNIVERSITY

It will, I think, be admitted that the weakest point in most systems of Higher education is the junction between school and university. I am not speaking of those who are fortunate enough to pass from the English Public Schools to the universities of Oxford and Cambridge. If they read for Honours, as most of them do, they are getting the best education to be had in Europe, and even the Passman spends his time a good deal more innocently than the mass of German students. It is worth while to dwell on this point a little. As we have seen, the German Higher school is a sort of social sieve. If a boy is sent to the Preparatory department of a Gymnasium at the age of six, he has the prospect before him of spending twelve whole years among the same surroundings, and he is all the time

running the gauntlet under the eyes of ambitious parents, who regard every failure as a disgrace to the family. A certain number drop off every year, and a great clearance takes place at the stage where it is possible to secure exemption from the ordinary military service. Those who remain have three more years before them and then, when they are nineteen or older, comes the final purge of the Maturity Examination. One would suppose that the comparatively small number who come successfully through all this would be thoroughly equipped for special study in a university or other High school, and so in a sense they are. Unfortunately this result has been attained by ignoring human nature and that now asserts itself. We must remember that hardly any student enters a German university much before he comes of age, and that there he is plunged into an atmosphere of liberty for which he has not been prepared in any way. He is under no obligation to study for a degree, and the State Examination, the only thing that matters, is five or six years ahead. He is his own master, then, for the first time in his life, and it is no wonder that he should make it his chief business to amuse himself. For him the *Lernfreiheit*

of the German university spells *Bummelfreiheit.*[1] The tragedy is that he is too old to learn to enjoy himself naturally. I do not wish to draw too dark a picture of German student life, but the corps system and the *Mensur*, the so-called students' duel,[2] do exist, and beer plays a wholly disproportionate part in life. Compared with the clean and healthy existence of nine out of ten undergraduates at an English university, there can be no doubt that the academic life of Germany is almost always demoralising and very often degrading. Nor is a student wholly free to avoid its

[1] Here is the testimony of the Dean of the Faculty of Law at Bonn. In 1908 there were 842 students of Law in that university, and yet some of the courses had only ten students and even a popular course had not more than forty. "The evil may vary from university to university, and from professor to profesor, but it rages everywhere more or less. A sincere statistic would bring terrible figures to light." Some begin to think of Law only after the end of their second year; they do not even try to catch up the courses they have missed and they "build on the sand." Most of them do not even go near the university; they prefer the "Repetitorien" (private coaches' establishments), "where they acquire an artificial knowledge which disappears as quickly as it came." Ernst Zietelmann, *Die Vorbildung der Juristen* (Leipzig, 1909).

[2] For a most interesting account of these, see Prof. F. H. Swift, "The Making of a Gentleman in Germany," *Contemporary Review*, No. 610 (Oct. 1916), p. 465.

excesses. Apart from all the other motives that make for conformity, it appears to be the case that membership of a good corps is necessary for success in after life, especially in those careers to which the study of the Law leads up. I cannot help thinking that there is a close and intimate connexion between the bloodthirsty practices of the *Mensur* and certain unpleasant features in the behaviour of Prussian Reserve officers during this war. The students' duel is no school of courage or of any other military virtue, and it fatally distorts the sense of honour, but it does teach its votaries to take pleasure in bloodshed merely as such. I do not wish to dwell on these things, but it is impossible to frame a just estimate of Higher education in Prussia without referring to them. We are bound to compare its products with those of our own, and it is very certain that the British subaltern from the O.T.C. need fear no comparison with the *Einjähriger* who has become an officer in the Prussian Reserve.[1]

[1] The Prussian military statistics show that the percentage of pupils from the Higher schools rejected as unfit for military service is high, but they also show that the years after leaving school are responsible for most of the unfitness. *Neue Jahrb. f. Päd.* xxx. (1912), p. 357.

I

The root of all the trouble is undoubtedly that the Germans keep their sons too long at school. Professor Ostwald has discovered that, though he has completely failed to trace the evil to its source; for he puts all the blame on the Higher schools and their teachers. At a popular meeting on the subject of "School-misery" (*Schulelend*)[1] he made a great point of the fact that the lowest class in the Higher schools of Prussia was called *Sexta*, thus proving that there should only be six classes instead of nine as there actually are. The duplication of classes in the middle and upper divisions of the school he seems to attribute to the mere malignity of the teachers. Great men, he insists, are 'ripe' for higher study at seventeen or earlier and it is wicked to keep them at school when they might be studying *Energetik* at the university. That, of course, could easily be dealt with, one would think, by accelerating the promotion of the abler boys, as has been explained already, and the number of 'great men' in the Prussian Higher schools is probably not high. Nevertheless, every-

[1] That such a word should be coined and become current is in itself a sign that something is very far wrong.

thing we have seen so far tends to confirm Ostwald's general view that it is bad for young men to be kept at school so long as is usual in Germany. It was not always so, as his observation regarding the title of *Sexta* sufficiently proves, but he is quite at sea with regard to the historical causes of the addition of three whole years to the school course. These are quite clear. It is entirely the fault of the German universities, which have allowed the Faculty of Arts to disappear and have turned the Philosophical Faculty into a conglomerate of specialist departments. In the early part of the nineteenth century, this was not the case to anything like the same extent. There were still in the German universities a number of great men and great teachers who regarded it as their chief business to enlarge the intellectual horizon of the young men who came to the universities, so that, when the time came for them to devote themselves to special studies, they could undertake these in what was then called a 'philosophical' spirit. In some parts of Germany that was the case even later. I suppose Lotze was the last man who exercised an influence of this kind. Unfortunately the newly founded university of Berlin soon proved unfaithful to the spirit in which it was started, and settled

down more and more into the routine of specialism. In that way, it has produced much valuable work for which Europe is indebted to it, but it has entirely renounced its primary function of educating its students. That is why the German Higher schools have to keep their pupils till they are close on twenty. When they leave school, their liberal education must be completed, and a liberal education can only be completed before that age in quite exceptional cases.

The result is that the young German is *blasé* before he comes to the university. Bethmann-Hollweg, who was Minister of Public Worship and Instruction from 1858 to 1862, put his finger on the evil, which was beginning to manifest itself already at that date. "Our young people," he said, "mostly come to the university flabby and flat. Do try to see that they leave for it more ignorant. The Gymnasium has no need to teach Physics, nor so much History, nor even so much Greek."[1] C. Reinhardt mentions that many university teachers complain of the systematic study of Physics in the

[1] "Die jungen Leute kommen meist welk und matt zur Universität; sorgen Sie doch dass sie unwissender dahin abgehen; das Gymnasium braucht nicht Physik, nicht so viel Geschichte, nicht einmal so viel Griechisch zu lehren" (quoted by Wiese, *Lebenserinnerungen*, i. p. 209).

schools on the ground that it robs them of what is best in their students, a fresh, living interest. Medical students often confess, he says, that they can pass their first examination—the so-called *Physikum*—on the strength of what they remember of their school work, and he considers that most unsatisfactory. It is the business of the school to send its pupils away hungry for knowledge, not satisfied.

II

The root of the matter surely is that Higher education falls properly into three periods and not into two, and that, if we ignore that fact, we get into trouble at once. There is the period up to about seventeen, in which the pupil is chiefly engaged in entering on the inheritance of humanity, the period from about eighteen to twenty-one, when he makes this his own and forms a personal view of the world, and the period from twenty-one onwards, when he is ripe for some special study in the department he has chosen for his life's work. The intermediate period is really the most important, but it is the one we are most apt to go wrong about. In Germany it has come to be tacked on to the school course, with the unfortu-

nate results I have tried to describe, while in this country some people, who imagine they are 'practical,' would have us omit it altogether and start special training at seventeen or eighteen. All experience shows that in that way you may get efficient practitioners of a subaltern order, but you will never get an *élite* of men fit to be the leaders of the nation. These are generalities at present, but I hope to make the meaning of them clearer as I go on.

In the first place, I should like to insist on the fact that all the difficulties Prussian schoolmasters themselves feel in the working of their system arise in the three highest classes, or at any rate do not become acute till that stage. The dividing line between the upper division (the *Oberstufe*) and the rest of the school is forced upon them in a very objectionable way, namely, by the exemption from military service which can be won at this point, but it lies in the nature of things quite apart from that. It is curious, for instance, that U II should be regarded as part of the middle school and O II as part of the upper. Still more interesting is the fact that German schoolmasters appear to be unanimous in their opinion that *Untersekunda* is the most difficult of all classes to teach, and in every way the most unsatisfactory.

It belongs to what they call the *Flegeljahre*. Now I do not think any English or Scottish schoolmaster would agree that sixteen or seventeen is the difficult age, and I think this difference is due to the fact that the *Sekundaner* is in an unnatural position. At his age he ought to be looking forward to the end of his school life and to a fresh start at college. Even in the English Public schools we do not find young men in their twentieth year. Just before the war, in July 1914, the average age of the boys in the three highest forms at Harrow School was as follows—

Upper Sixth	18.2
Lower Sixth	17.1
Upper Fifth	17.2

This result is deliberately secured by the Harrow system of Superannuation, which is based on just the opposite ideal to that of the Prussian system of Maturity, and is surely a great deal healthier in its operation.[1]

[1] The rule is as follows: "No boy can remain in the School (without special permission) after he is 16 unless he has reached the Shell: after 17 unless he has reached the Fifth Form: after 18 unless he has reached the Sixth Form: nor in any (ordinary) case after 19." It will be observed that the effect of this is to make the average age of the Upper Fifth slightly higher than that of the Lower Sixth.

III

It is interesting in view of all this to observe that a German educationist thinks he has found the solution of these difficulties in the American institution of the 'College,' which corresponds almost exactly to the Scottish Faculty of Arts, while the 'University' means in America the school of graduate and professional study. He points out that school discipline and a rigid curriculum are not appropriate at the age of the pupils in the three highest classes of the Higher school, so he proposes that the upper divisions (*Oberstufen*) of several Higher schools should be united to form an institution like the American College, and so provide a natural transition from the school to the University.[1] All sorts of objections have been made to this proposal, but, so far as I can see, they come to nothing more than that it would be impossible to adjust it to the existing institutions of Germany. That may well be true, and I think it is; for the proposed 'College' ought to be attached to a university if possible, and the German universities have lost even the

[1] P. Ziertmann, "Das amerikanische College und die deutsche Oberstufe," *Pädag. Archiv*, Jahrgang 51.

notion of what we call the Faculty of Arts. The American system is right for all that. It has some weak points, no doubt, but it has grown up organically in response to the increasing demand for higher education in the United States, and it therefore exhibits clearly in its High School, College and University the threefold structure which corresponds to the natural development of the youthful mind.[1]

This point may be further illustrated from French experience. In former days the Faculties of Letters regarded it as their chief aim to foster the general culture of their students, but since 1870 they have been more and more influenced by the example of Germany, and have adopted to a large extent the aims and methods of the German universities. That has produced what is known as *La crise du français.* It is alleged that young Frenchmen can no longer write their own language, and that they have no *idées générales.* A violent attack on the whole system is contained in a little volume published under the pseudonym of Agathon, and entitled *L'esprit de la nouvelle Sorbonne.* There is evidently a great deal of

[1] There are obvious possibilities of expressing this in Hegelian language!

exaggeration in it, but it bears witness to a real unrest. So far as the candidates for State bursaries are concerned, the difficulty is met by the existence of *rhétoriques* or *premières supérieures* in the Lycées, classes in which young men may stay two or three years after completing the ordinary course, but that cannot be considered a satisfactory solution, since it seems that they may stay at school till they are twenty.[1] Various suggestions have accordingly been made with a view to introducing some possibility of general education in the universities, and a scheme was drawn up by M. Clédat and approved by the majority of the Faculties of Letters for the institution of an *année propédeutique* in the Faculty of Letters, which should be devoted to Philosophy and Literature, and would be the rudiment of a Faculty of Arts.[2] Professor Cestre of Bordeaux, who has taught both in the United States and in Scotland, is much impressed by the need of something of the kind in France, and he writes as follows about the American College—

"This traditional institution, which is inter-

[1] What makes it worse is that the Lycée is a boarding school and that the 'boys' are only allowed out on Thursday afternoon and Sunday.

[2] *Revue Internationale de l'Enseignement*, lx. p. 498.

mediate between the Secondary School and the Faculty (*i.e.* the University proper), offers to the youth of America—not only to those who are destined for the liberal professions, but also to future business men, bankers and industrial leaders—the means of advancing their instruction a considerable way into the domain of Higher education, and along with that the opportunity of preparing themselves from their youth for the life of a man and a citizen. In my opinion it is a grave defect of our university system that it offers the majority of young Frenchmen the *Baccalauréat* (which is appreciably below the level of the American A.B.) as the termination of their moral and intellectual training, when they leave the Lycée, where they have been subjected to the discipline of children. Our young men would gain much in strength of character, in moral energy, in initiative and civic virtue, if the tradition were established among us of attending the university for a year or two after leaving the Lycée, and if, at the university, this new population of students, free from professional preoccupations and open to generous enthusiasms, were initiated by associations of a scientific, literary or social character, by debating societies and by groups for philanthropic action,

into responsibility, decision, virility and at the same time into tolerance. That is the lesson the French might learn from the American College."[1]

Everywhere, in fact, voices are beginning to make themselves heard on the Continent in favour of adopting something like the traditional university system of the Anglo-Saxon peoples. It is hardly the moment for us to move in the opposite direction.[2]

IV

What makes reform in this direction difficult is the existence of the Baccalauréat in France and of the Abiturient examination in Germany, and there is a considerable body of opinion in favour of abolishing both of them. The question of the

[1] *Revue Internationale de l'Enseignement*, liii. p. 384.

[2] For a defence of the American College which will appear convincing to most people in this country, see "The College," by M. Carey Thomas (the President of Bryn Mawr) in the *Educational Review*, xxix. (1905), p. 62. The attacks upon this institution in the United States have apparently produced a strong revulsion of feeling in its favour. Its chief difficulties arise from the fact that it is frequented by the 'idle rich,' a class which will disappear when America wakens to its political and international responsibilities.

Baccalauréat would require separate treatment, and I shall say no more about it here, as I am dealing mainly with Higher education in Germany, but it is very important for us to note the growth of discontent there with the Abiturient examination. I have mentioned already that the Socialists are beginning to raise the cry of free access to the universities, but it is not only in their camp that the idea is making way. It is true that, when the opinions of thirty-nine leading men in various walks of life were taken on the subject in 1906, thirty-three of them were in favour of retaining the examination in some form or other. One of them, for instance, proposed to substitute a Preliminary Examination at the university. The minority of six, however, included Professor von Wilamowitz-Moellendorff, who added a note that he did not wish the examination suddenly abolished, but that the experiment should first be tried of dispensing a number of admittedly good schools from it. His own old school, Pforta, would, of course, be one of these, and that gives additional interest to the following outburst of Dr. G. Siefert of that school, who is certainly not a Socialist. He says—

"When the wretched Leaving Examination has

once fallen, and the precious last months of Oberprima, which have now to be wasted on cramming for an examination, become free for it, perhaps time will be found for introducing the future students to the great questions of the day, and giving them a guide for the journey of life (*Hodegetik fürs Leben*) to take away with them."[1]

That, I take it, is what the Headmaster of an English Public School endeavours, and not without success, to do for his Sixth Form, but there is no room at present in Prussia for the methods of Dr. Arnold.

The crisis of the Abiturient Examination has, of course, been precipitated by the grant of equal privileges to the three types of Higher school. The Prussian universities are bound to receive every student who produces a Maturity Certificate from any of these, and they are not allowed to receive anyone else. Moreover, any such student may be admitted to any Faculty, and may select any line of study he pleases. That has made it necessary to institute supplementary examinations in certain subjects, which give only the appearance of sufficient preparation without the reality, and thus increase the confusion still further. The situation

[1] *Neue Jahrb. f. Päd.* xx. (1907), p. 417.

will be best understood from the following extract from Cauer—

"Should the abiturients of the Oberrealschule be permitted to study Law,—people who do not know any Latin? The answer is that either Law studies and examinations are so arranged that it is impossible to get through them without Latin (there *are* people who doubt this), and in that case no one who is ignorant of Latin will attempt to study Law. . . . Or legal studies and practice can be so arranged to-day that one can manage without reading the Corpus Juris personally (there *are* people who affirm this), and in that case you will hardly succeed in making the reading a more living thing by requiring a certificate from the student that he has enjoyed instruction in Latin for nine long years. It is therefore either superfluous or useless to require a Maturity Certificate from a Gymnasium for admission to the study of Law. The case stands hardly otherwise with Theology and Philology. Here even a superficial study is undoubtedly quite impossible without a knowledge of the two ancient languages, and just for that reason there is no reason to fear that anyone will ever attempt it. But if there were really found among the abiturients of the Ober-

realschule a young man with enough enthusiasm and energy to learn so much Greek and Latin at the university as to be able to study Theology or Philology, then we should have to found a golden wreath of honour for him *ἀρετῆς ἕνεκα καὶ φιλοκαλίας καὶ σπουδαιότητος.*"[1]

As any university teacher in this country could have foretold, there were more candidates for Cauer's wreath of honour than he expected. It is just as certain that there will be a fair proportion of young men from the non-classical schools with a vocation for careers requiring a knowledge of the humanities as it is that there will be a fair proportion from the classical schools who feel drawn to scientific pursuits. With regard to the study of Law, the solution finally adopted was this. Candidates from the Oberrealschule were obliged (1) to pass a supplementary examination in Latin on the standard required for admission to U I of a Realgymnasium, (2) to attend a Latin class at the university, and (3) on receiving a certificate of having duly performed the work of this class, to attend a course on Linguistic Introduction to the Sources of Roman Law. Similarly, the abiturients of the Oberrealschule are admitted

[1] *Neue Jahrb. f. Päd.* xxxii. (1913), p. 188.

to the study of Medicine on condition that, before their first medical examination at the end of their fifth semester, they pass an examination in Latin on the standard required for promotion to O II.

V

That means, of course, that the universities have been obliged to establish Preliminary or Auxiliary courses (*Vorkurse*, *Aushilfekurse*) in Latin and Greek, in which students may fill up the gaps in their school training. It is now possible to begin Greek in the University of Berlin, and one of its most eminent professors told me a year or two ago that the experiment was a great success, and that he even expected in time to get some *tüchtige Philologen* from the Auxiliary course. I have no doubt that this expectation will be realised; for I know what can be done in our Junior Classes in Scotland.[1] But it cannot stop there. It seems to be admitted on all hands that the Maturity Certificate is no longer of any use in

[1] A young man came to St. Andrews a few years ago with a Leaving Certificate from a good Secondary School but no qualification in Greek. He took our Junior Greek Class, and four years later he gained the Ferguson Scholarship in Classics open to the four Scottish universities. Not long after that he took the fifth place in the Indian Civil Service Competition.

excluding unqualified students from the universities, and there is every reason to believe that the want of such a certificate excludes many who are at least as well qualified for some kind of university study as the abiturients of the Oberrealschule are qualified for the study of Law. I do not suppose that the Maturity Examination will be abolished yet awhile, but I hardly see how it can be allowed to bar the entrance to the universities for very much longer. That can no longer be justified. The monopoly of the Gymnasium has been swept away, and the new monopoly of the three Higher schools is a good deal less easy to defend than that was. Once you have admitted the principle that a certificate of 'ripeness' from a Higher school admits to any kind of university study, quite irrespective of whether the education given at that school is a proper preparation for such study or not, it really becomes impossible to maintain the demand for anything more than such a general education as may easily be attained by the age of seventeen, and that might be got just as well at an Intermediate or Middle Class school as at a Higher school. In the absence of a proper Faculty of Arts at the universities, it was possible to make out quite a good case for the monopoly

of the Gymnasium, but the defence of the present position seems hopeless. A good many questions will be asked in Prussia after the war, and it is pretty clear that one of them will be: "Why should young men be excluded from the universities just because their parents cannot afford to keep them at school till they are close on twenty?" It may also be remembered by the people of Prussia that the decree by which the Abiturient Examination was instituted was accompanied by the following declaration: "It is not desired to limit civic freedom by preventing a father sending a youth to the university, even though he is immature or without ability." As it can no longer be pretended that the Maturity Certificate guarantees the fitness of its holder for university study, it will probably strike an increasing number of people that it is merely a class privilege. Whether it can be maintained for long in these circumstances, I do not know, but I should hardly think so.

Now, if the present monopoly of the Higher schools is once broken down, it is perfectly certain that their higher divisions (O II, U I, O I) will disappear, and Professor Ostwald's heart will be gladdened by seeing the number of classes reduced once more to six. That, however, will not solve

the problem in the least. We have seen that, even as it is, the universities have been driven to the institution of *Aushilfekurse*, the very name of which marks them as an emergency measure intended to help students out of the difficulties created for them by the present system. That will have to be done in a much more systematic way in future, and the result will be the re-establishment of the Faculty of Arts, whether under its historical name or another. That will solve all difficulties, and I do not see how they can be solved in any other way. They all arise from the mistake of treating young men as if they were boys, and that can hardly be avoided so long as you keep them at school. It is quite easy to give a reasonable latitude of choice between the different subjects of an Arts course without running into the excesses of the Elective System, now happily moribund even in the United States. It would also become possible to secure all the advantages the present Maturity Examination is supposed to secure by making the possession of an Arts degree essential for admission to any of the higher faculties. That is the logical outcome of the Reform of 1901, which was based upon a perfectly sound principle, but has created the present

confusion just because it did not go far enough. To make the Maturity Examination the only gateway to the university is a workable arrangement so long as only one type of school with a definite curriculum is allowed to prepare students for the university; when this ceases to be the case, the system is bound to break down.

CHAPTER VII

SCOTLAND AND PRUSSIA

I HAVE said that in Scotland we have to some extent solved a problem which has been very imperfectly solved in England, and which, as we now know, has not even been attempted in Prussia, that of drawing our *élite* from every class of the community. It is possible with us for a pupil from the Primary school to go on to a Secondary school and so to the university, and the thing is actually done by a considerable number of boys and girls every year. There are difficulties about it, no doubt. It is not easy to transfer the pupils from the Primary schools soon enough to give them a fair start in the Secondary school, and it often happens that they do not get quite the right preparatory training at the Secondary school to fit them for college. Each school has its proper function, which it is bound to discharge without considering too specially the needs of the minority

who are going on to a higher stage of education. In the long run, however, we are able to overcome those difficulties, because we still have what the Germans have not, a Faculty of Arts in our universities. Everything depends on that, just as everything depends on the College of Liberal Arts in America. So far as I can judge, the Faculties of Arts in the newer English universities are more and more coming to perform the same function in their own districts,[1] and that is why I believe a statement of our experience in Scotland may be of use both by way of example and of warning. I desire to emphasise the latter point particularly. We are by no means perfect, and I am inclined to think some recent changes have been in the wrong direction, but that makes it all the more important that they should be freely discussed by those who are in personal contact with the working of our system. It is not enough to study Regulations

[1] At Oxford and Cambridge the age of entrance is, of course, higher. It is only the first eighteen months or so that correspond to the American college. It would be very instructive if the Board of Education would ask for the average age of entrant students in the Faculty of Arts in the English universities with which it deals. I suspect that it would not be higher than in Scotland. At present the average age of entrants in all Faculties is given, so that a comparison is impossible.

and machinery on paper; what is wanted is experience of their effect on actual human beings, and that I may claim to have gained in the course of a quarter of a century's daily association with Scottish students of every type.

I

I do not propose to speak here of the relations of the Elementary to the Secondary school, for I have thought it best to confine myself in this volume to Higher education. What I wish to discuss is the way in which the Secondary school is made to lead up to the university, and that brings us at once to the question of the Leaving Certificates of the Scotch Education Department, which have done so much for our schools in the last quarter of a century.

In the first place, it is necessary to make it quite clear that these do not correspond in any way to the German Maturity Certificates, and are not, therefore, open to the same objections. That is settled at once by the age at which they may be got, which is about three years earlier. The Scottish Leaving Certificate answers, in fact, to the *Abschlussprüfung*, which was abolished in Prussia fifteen years ago, or to the certificate of ripeness

for O II, which gives exemption from the ordinary military service. Difficulties only arise when this fact is ignored. A great deal of mischief is done by people who argue, for instance, that since the Prussian Maturity Certificate is supposed to guarantee the fitness of its holder for specialised university study, the Leaving Certificate should do the same. There is no country in the world where that would be expected of a certificate which can be gained before the age of seventeen, and I am sure that any attempt to treat the Leaving Certificate as a Maturity Certificate in the German sense can only lead to disaster. Not one boy in a hundred is ripe for higher study at the age the Leaving Certificate is granted, and I believe it is just this utterly mistaken idea that prevents the Department from organising the examination as I cannot help thinking it would do if it had really a free hand. As it is, it feels bound to try to satisfy certain quite unreasonable demands which are made on it. What I mean will best be shown by a comparison of our system of examination with the Prussian in one or two points of great importance. We shall see that we are always brought back to the fundamental question of age.

II

In Prussia the schoolmasters alone have a voice in the promotion of the boys from one class to another and, since the abolition of the *Abschlussprüfung*, they alone have the power of determining whether their pupils deserve exemption from the ordinary military service or not. Even in the Maturity Examination, they have the initiative in suggesting subjects for themes and versions, and they mark the papers in the first instance. The Royal Commissary has, no doubt, the decisive voice; but it appears that, on the whole, he is there chiefly for the purpose of getting a few more candidates through than would otherwise pass, and his function is that of a guide, philosopher and friend rather than of an Inspector.[1] This is the only point at which he now intervenes at all, and it is at a stage which does not exist in any Scottish school or any English school either.

In Scotland the practice is quite different. The Department employs its own examiners to set the papers, which are marked by revisers appointed by

[1] See p. 138. Paulsen was in favour of abolishing the veto of the Royal Commissary altogether, and of giving the chief weight to the school record. That has not yet been tried anywhere.

the Department. So far as the written part of the examination goes, the teachers do not come in at all. That was no doubt inevitable when the examination was first started, as it was necessary to establish a uniform standard for the whole country, but of late years it has been the practice to consult the teachers and to give a certain amount of weight to the school record. It is obvious that this is a healthy development, and that the tendency will be, and ought to be, to carry it a great deal further. It seems to me, however, that further progress in this direction implies the abolition of the present written examination, in which identical papers are set for the whole country, and the institution of a separate examination in each school conducted by the teachers in conjunction with the Inspector. In this respect, the German practice seems very superior to ours; for there is no external examination at all, and so long as we continue to have one, it will be generally and rightly regarded as the most important thing. It is from the same point of view that the abolition of the Baccalauréat is advocated by many people in France.[1]

[1] The examination for the Baccalauréat is conducted by the university of the region. The great difficulty which stands in

III

The objections to an external examination like the written examination for Leaving Certificates are of many kinds. In the first place, it is a very difficult thing to set papers which shall be fair to all schools. I shall illustrate this point from the department of Classics, simply because I happen to know most about it. The passages set for translation must necessarily be 'unseen' (though it is impossible to make sure that they actually are so in the case of all candidates), and that, in my opinion, imposes far too great a strain on boys and girls of sixteen or seventeen. Undoubtedly the power of translation at sight must be tested under any system, but the test ought to be framed with reference to the work the candidates have been doing during the year. If a class has been reading a book of Livy, for instance, it is quite fair to expect them to be able to translate a simple passage from another book of the same author, and it is possible to make sure that the vocabulary

---

the way of abolishing the Baccalauréat and substituting an internal examination is the existence of the 'free' (*i.e.* church) schools, which are supposed to stand in need of external control.

is such that they ought to know it. That can be done under the Prussian system, where there is a separate examination in every school, but it cannot be done with us. The same thing applies to Homer, but I very much doubt whether we have a right to expect candidates of this age to translate Virgil or Horace or the Greek tragedians at first sight at all. German boys of the same age would hardly even have read any of these authors. Nor is it merely a question of the language. You might know your grammar perfectly and possess the whole vocabulary in a way, and yet miss the point altogether in trying to render subtle and allusive poetry. In Prussia, where the candidates are older, such authors are generally reserved for the oral examination, where it is possible to give just the help that is required to put them on the right lines. An inspector can do that, but it is almost impossible to judge what will prove to be an insuperable difficulty in a written paper. The fact is that we ask for too much, and in consequence we get very little. No one would say it was fair to set a French or German boy of sixteen or seventeen a passage of Tennyson or Browning and plough him if he could make no sense of it, but that is just the sort of thing we do in our

classical examinations. The result is that the candidates make such random shots as occur to them with the hope of scoring a mark or two here and there, and they are gravely admonished by the Examiner that they should remember that the Greeks and Romans always wrote sense. The boys know that as well as he does, but the knowledge is not of much use to them in the circumstances in which they are placed. All they can do is to show that they know the meaning of some of the words in the passage, though its general drift escapes them. I conclude, then, that if an identical paper is to be set in all schools, it ought to be very much easier than anything anyone would venture to set at present, and in that case it would fail to test the work of the schools. I can see no way out of this dilemma.

IV

Another objection to the present practice, which seems to me a very weighty one, is that to rely entirely upon 'unseens' fosters the erroneous view that knowledge of the language is the end of instruction, instead of being the means by which that end is reached. No doubt, as I have admitted, and indeed insisted, in another connexion, accurate

grammatical drill is a thing of great value in the earlier stages of education; but if languages, whether ancient or modern, are to be a real part of education, we must go beyond that. A boy of sixteen or seventeen ought to have got something far better out of his training than a knack of dealing with linguistic puzzles, and so far as the written examination tends to suggest that this is the chief thing, it diverts education from its proper course. It is quite true that mere grammar no longer holds so important a place in the papers as it used to do, and that in itself is a change in the right direction. It also tends, however, to lay more stress than ever on the 'unseen,' and there is no test at all of what we chiefly want to find out. That is surely whether the candidates have been getting all the good they can out of the books they have been reading, and no external examination like the written examination for Leaving Certificates can possibly test that. To take the case of Livy again, what we ought to test is not whether the candidates can translate a passage they have never seen, and of which they do not know the context, into more or less presentable English, but whether they have learnt to regard the book or books they have been reading

as wholes, whether they have a right understanding of them as history, and whether they have caught from them as much as possible of the spirit of Rome. This is excellently put in the Prussian official Programme, where the general aim of Latin teaching is defined as follows: "On the firm basis of grammatical training to achieve such understanding of the more important Latin classical writers as shall serve as an introduction to the intellectual life and culture of antiquity." It is only when such an aim is kept in view that the instruction becomes pleasant and profitable to teachers and to taught, but a schoolmaster who knows that his work will be tested mainly by the ability of his pupils to tackle an Unseen will not feel justified in spending too much time on anything that does not contribute directly to success in that operation. The best way to make sure of one's pupils passing is to practise them in the doing of Unseens, and no doubt that gives mental training of a kind, but it is not what we mean by Humanist teaching. For that the one thing needful is that a certain number of books should have been carefully studied as wholes in all their aspects, and that the human interest of them should be felt by the pupils. To make the

Unseen the chief test is implicitly to deny that, and to exalt the language into the place of that of which it is only the vehicle, the feeling and thought of antiquity. That can quite well be made living to boys of sixteen, but it is very difficult to do it if one is always thinking of a subsidiary end like facility in translating at sight. For these reasons I regard unseen translation in a Leaving Certificate Examination, except within the limits indicated above, as injurious to education. It suggests a wholly false idea of what classical teaching ought to be if it is to yield the results of which it is capable.[1]

From an educational point of view, the same thing is true of modern languages, though in their case mere linguistic facility has a positive value which does not exist to the same extent in that of the classical languages. It is useful, of course, to be able to manipulate French and German freely, but there is very little educational value in such facility taken by itself. That is proved by the fact that a child of three can acquire two languages

[1] It will be understood, of course, that I have nothing to say against Unseens in Scholarship or Honours Examinations. They are the best test of high scholarship, but at present we are thinking of boys and girls of sixteen who can lay no claim to that.

almost as easily as one, and that it remains a child nevertheless. If the power of speaking a foreign language was a mark of education, then, as Prof. Ostwald says, waiters and chambermaids would be educated people. It is an unspeakable advantage, of course, for an educated man to have the power of conversing freely in another language, but that is only because he is an educated man. Apart from that, such facility is mere psittacism. Children have an enormous capacity of acquiring languages "by ear," but it has very little to do with their mental development. That is why the new methods of teaching modern languages have proved so disappointing in their results.[1] What we really wish to secure is not that our boys and girls should be able to talk in French about the things around them, though that is good if it can be attained without sacrificing what is far more important, the power of appreciating French

[1] From a paedagogical point of view the chief shortcoming of those methods is that the work is thrown on the teacher instead of on the pupil. It is a significant fact that, while Prussian schoolmasters die on the average four years earlier than their fellow-citizens, "the case of modern language masters is especially bad, as during the same number of years their deaths occurred on the average no less than ten years before the period of normal expectation" (quoted in *Special Reports*, vol. 9, p. 110).

thought and letters, and of learning to know the soul of the French people.[1]

V

The only way in which it is possible to justify the great importance now attached to the Unseen is that the power of translating at sight is a guarantee that the candidate is fit to attend the university class in the language in question. That, I submit, is just one of the ways in which the Leaving Certificate Examination is spoilt by having to keep the requirements of the universities in view. After all, the majority of the pupils are not going to college, and their teaching should be so ordered that they will get as much good as possible out of it by the time they finish the school course, and that it will leave some permanent trace in their minds. Now it is quite certain that the language as such will be forgotten by far the most of them. They will never read a Latin book again, or even a French one, except,

[1] I do not mean this as a condemnation of Dr. Rouse's methods of classical teaching. On the contrary I think the methods in question are of great value there; for the classical teacher has to contend with the superstition that Latin and Greek are 'dead languages,' and it is well worth while to make boys feel that they are very much alive.

perhaps, an occasional novel. That is sometimes made an objection to language-teaching in schools, and there would be force in the objection if knowledge of the languages taught was really the chief end of instruction. The very same thing, however, is true of the other subjects of the curriculum. The ordinary man, who has not carried on his studies at college, remembers even less of his school Mathematics and his school Science than he does of his Latin and French, and yet everyone admits he has got some good out of them. I have said already that I do not regard the doctrine of formal discipline as an illusion, and the examination no doubt serves to some extent as a test of that, but it is plain that we ought to get something more from classical teaching. The written examination can only deal successfully with that part of it which is destined to be forgotten as soon as it has served its purpose, and it can tell us next to nothing of what is to remain as a possession for ever. The language must be learnt, of course, for there is not and never will be any possibility of contact with the spirit of antiquity except through the language. People who talk about learning it through translations only show that they do not know what it is. On the other

hand, once the contact has been established, the way of communication remains open, even though the language has been in part forgotten. We must insist on accurate grammatical knowledge in the early stages, if only because it is a soul-killing thing to accustom a young mind to inaccuracy of any sort, but we must not mistake the scaffolding for the building. It is very necessary at first, but, as the work progresses, it can be dispensed with more and more.

In particular, I think it certain that the excessive importance attached to Syntax in the classical teaching of the present day has led to the neglect of more important things. If you have a good command of the Vocabulary, it is generally possible to make out the syntax of a passage, and a knowledge of vocabulary is much more germane to what I have called the chief end of instruction than a knowledge of syntax. To have a command of ancient words is to have a command of ancient thoughts. At present, however, very few students come to college with a good working vocabulary, though they know all possible and impossible forms of the conditional sentence. Hence answers of the familiar type—"He said that he would be . . . if he . . ." Now vocabulary is just what

the examination cannot test. The examiner must either set a passage with a commonplace vocabulary or he must give translations in a foot-note. In either case he destroys the value of his paper as a test of teaching.

The Humanist ideal of education, as distinct from the merely Formalist, is that the pupils should above all be led to feel the meaning and worth of what they are studying. That means, among other things, that they should be able to place it, and that again means that, if the class is studying a Latin book, it should have at least a clear outline of Roman history and Latin literature. The German schools undoubtedly have the better of us in this matter. In the two lowest classes of the Higher schools they give at least one hour a week to what they call Historical Narrative (*Geschichtserzählung*), in which the boys are familiarised with the main lines of Greek mythology and Roman legend, so that when they come to read Greek and Latin books they do not find themselves in a strange world. For the rest of their course they have two or three hours of History (Ancient and Modern) every week. In this way they form a background for their reading which makes it possible for them to get far more

out of it than they otherwise would. That is just why young Germans, and still more young Frenchmen, are more at home in their subjects than our young people are. In this country there is a very pestilent heresy that all knowledge of history, literature and 'antiquities' should be derived from the books read, and that 'allusions' should be explained as they occur. In some mysterious way, this is supposed to be 'first-hand knowledge.' In reality it is not easy to imagine anything more contrary to sound principles of education. It means in practice that the pupil only acquires a fragmentary idea of antiquity as a whole, and that what he does know of it is in the form of isolated notices which are certain to be forgotten as soon as the immediate need for them is past. It is monstrous, for instance, that it should depend on the accident of the books read whether the class knows who Ennius or Lucilius were. It is impossible to read Virgil or Horace at all as they should be read without knowing something—it need not be much—about their predecessors. And even if there were any possibility of the boys reading enough Latin literature to get an idea of it as a whole, it is too much to ask that they should reconstruct it from

ad hoc explanations of chance allusions. It has taken the greatest scholars in Europe centuries to piece these things together, and the process is not complete even now. How can we expect boys to do it for themselves? The Secondary school is not and ought not to be a seminary of original research. The true method is to start from a general survey of the whole field in broad masses, and then to work up a part of it in detail. The masses cannot be too broad in the general survey nor the detail too minute in the part selected for special treatment. We make just the opposite mistake here to that which we make in dealing with Grammar and Syntax. There we give our pupils the framework and nothing to put in it. Here we hand them a number of loose bricks which they do not know what to do with. And the written examination is helpless here. All that can be done is to set a few 'General Questions,' with the hope of ascertaining that the framework is not wholly absent. An Inspector who knows his business could find out in half an hour how matters really stand.[1]

[1] The students who come to college from the Secondary schools now are incredibly ignorant of History and Literature as compared with those of thirty years ago. In consequence

VI

Something should also be said here on the question of Composition. It may be held that an external written examination like that for the Leaving Certificate is able to deal better with this, and to some extent that is true. It is undoubtedly the case that in such examinations the translation from English into Latin or Greek is much better done than the translation from Latin or Greek into English. That is just because there is practically no danger of the general drift of the passage set being missed. The public, however, does not understand why we should teach Composition at all, especially if we take the Humanistic principle rather than the Formalist as our guide. The German Emperor holds the same view. As King of Prussia he has succeeded in getting Greek Prose practically abolished in the Higher schools of that country, and Latin Prose reduced to a minimum. I do not believe that the average Prussian Primaner is capable of doing proses such as are set by the Scotch Education Department. The result is, of

we have to make them 'cram' at the university subjects which they ought to have been taught at school. It is not their fault. They are the victims of a preposterous theory.

course, that these things have to be taught in the Prussian universities to young men of twenty-one and over. The following extract from an admirable little guide for students of Classical Philology[1] in the German universities will show how the matter stands—

"The Linguistic and Stylistic Exercises (*Die sprachlich-stilistichen Übungen*) treat thoroughly questions of Stylistic, Synonymics, Phraseology, etc., and try to lay a firm foundation for the ready use of the Latin language in the Seminary, the State Examination and in scientific work, in view of the acknowledged falling off in the command of the Latin language at the Gymnasium. In respect to Greek, their aim is more modest. Now that in the higher classes of the German Gymnasium translation is almost entirely from Greek into German, and it is no longer possible to think of a free use of the Greek language, these exercises only aim at practising the young student in a more or less correct use of Greek grammar, including Synonymics, etc. It is well known that this is very necessary. There is nothing that University professors complain more of than the

[1] *Wie studiert man klassiche Philologie?* by Dr. H. Zwicher (Leipzig, 1908), p. 26.

frequently lamentable results of the Greek written work (*Klausurarbeiten*) in the State Examination, even in the case of otherwise good scholars. The beginner should therefore attend these exercises most diligently. In the first Semester he can make many a stupid mistake without arousing attention or merriment, whereas in the later Semesters it has often a painful effect when anyone makes grammatical mistakes *coram publico*."

That is another instance of the topsy-turvy arrangements of modern German education. The grammatical drill which we consider appropriate to the lower classes has to be done at the university, when the student has come of age! These things must be done some time; and, if they are not done at the right time, they will have to be done at the wrong time.[1]

Now it is very desirable that there should be no mystery about this matter of Composition. Composition is not an end in itself, but we hold in this country that the best way of learning any language is to translate into it, not to translate out

[1] Of course we do the same sort of thing in the Scottish universities, but our students come to us at an age when they would be in Obersekunda in Prussia. Once more we see that, in spite of theory, the German university teacher has to prepare his students for their State Examination.

of it, and we do not regard time spent on Composition as lost for reading, since it enables us to read more than we should otherwise be able to do. The importance of the laboratory side of science teaching is being more and more emphasised, and Composition holds exactly the same place in language teaching that experiment does in the teaching of science. Moreover, the pupil takes pleasure in it, because he feels he is producing something and is not merely receptive. The end of these exercises, however, is mastery of the language and not virtuosity, though when that comes of itself there is no reason why we should not welcome it. It is at least the outward and visible sign of something far more important.

Whatever the reason for it may be, there is no doubt of the fact that the German Gymnasiast has read a great deal less at the same age than the English Public School boy, and even than the Arts student in a Scottish university. In Greek, for instance, he reads no Greek tragedy till he reaches U I, that is to say, till he is about eighteen years old, and has learnt Greek for four years. He seldom reads more than three plays altogether, and these do not include a single play of Aeschylus, except in the rare cases where there are additional

voluntary classes (*Selekta*). It is true, on the other hand, that a good deal more of Homer is read in the Prussian schools than is common in this country. It must, of course, be remembered in making such comparisons that in Germany the Greek books read at school are all that will ever be read by most boys. Only those who are going to be teachers of one kind or another carry on the study of Greek at the university.[1]

The average age of my 'Bejant'[2] (first year) class at St. Andrews is just eighteen. In that respect they correspond to the Prussian Unterprima (U I), but it must also be remembered that they have not, as a rule, done Greek for more than three years, so that it is only fair to compare them with Obersekunda (O II). I always ascertain what

[1] It will be observed that Prussians who are supposed to have had a classical education have not, as a rule, read the *Prometheus* or the *Agamemnon* nor any Plato except the *Apology* and *Crito* and parts of the *Phaedo* or some other of the longer dialogues. Both Greek and Latin comedy are outside the range of the Gymnasium. Yet there are nine years of Latin and six years of Greek.

[2] That is to say *béjaune* (*bec jaune*), *Gelbschnabel*. The more correct form is *bajan*, which remained in official use at St. Andrews during the eighteenth century. There was a 'Regent of the Bajans,' and I suspect that the word has been modified by analogy.

Greek books they have read before coming to college, and I have no hesitation in saying that their reading compares very favourably, both in extent and variety, with that overtaken by the Prussian Gymnasium in the same time. Indeed, I am inclined to think that our schools attempt rather too much than too little in the three years which they usually have at their disposal for the study of Greek. They do it extremely well, however, and of course it is only the best boys and girls who take Greek at all. If it is remembered that three years is the normal time for the school study of Greek, there is certainly nothing to complain about in the preparation of the students that come to us. I have indicated already that I am not in favour of beginning Greek at an earlier age than we do at present, and I would point out here that the postponement of it to the age of fifteen or so has the advantage that it makes it more possible for those who have not taken Greek at school to make up their leeway. A considerable number of my best students have only learnt Greek for a year or less before they come to me, and they make up for that by the increased eagerness with which they study it.

I do not complain at all, then, that Greek is begun so late in Scotland. It is, on the contrary, a great gain to have a new and fascinating subject to start on about the age of fourteen or fifteen. I even believe that it would be better in the long run for the study of Greek in England if it were not begun at so early an age as is now customary. It seems to me that it would be a great advantage to the Public Schools if they had a new subject to start on in their lower forms. The paedagogical importance of fresh starts is very great indeed, and a sound curriculum will provide for a succession of these at proper intervals.

So far, then, the position of Greek in Scotland must be regarded as very satisfactory. It is quite true that compulsory Greek has disappeared, and that there are fewer people now who know the Greek alphabet and have a bowing acquaintance with Greek declensions and conjugations and the *Anabasis* of Xenophon. That, however, is more than made up for by the increased number of students who really know Greek. The number of those who take it as a subject for an Honours degree has increased very considerably since it ceased to be a compulsory subject, and that means that the number of people who remember their

Greek in later life has increased too. I believe, nevertheless, that things would be better still if schoolboys and schoolgirls who take Greek were not submitted to a rigorous test by an external examination after three or four years' study, a test which is not applied in any other country at that stage. An examination at the school by the Inspector is all that is necessary to secure good teaching. Unfortunately the Department has not a free hand in this matter, and that brings me to the point where our experience in Scotland may be of use as a warning.

VII

When the Commissioners under the Act of 1889 instituted a Preliminary Examination in the Scottish universities, they empowered the universities, through their Joint Board of Examiners, to accept the Leaving Certificates of the Education Department as an alternative, so long as they were satisfied with the standard of the papers set. If this only meant that they were to be accepted as evidence of a sufficient general education to enable their holder to enter upon study in the Faculty of Arts, the matter would have been simple enough, but unfortunately the Commissioners thought it

necessary to go further than this. They ordained that no student should be admitted to the classes of Latin, Greek and Mathematics who did not pass an examination on those subjects on a higher standard. That makes it necessary for the Education Department to fix the standards of its Higher Grade Examination with reference to the requirements of the Higher Standard in the University Preliminary, which was not primarily intended as a test of general education, but only to ascertain whether intending students were sufficiently prepared to enter particular classes. I need not go into further details, but it will be plain that this had all the disadvantages of the Prussian supplementary examination (*Nachexamen*) with the added disadvantage that it was imposed on the schools. The question of whether a candidate has had a sufficient general education for his age and the question whether he knows enough of a particular subject to enter a particular class at college are quite distinct, and no single examination can furnish a satisfactory answer to both. There is no reason why the universities should not accept a simple Leaving Certificate as evidence of sufficient general education for matriculation, subject to any further test that may be necessary for

students who wish to take up a particular subject. No one can be a proper judge of that, however, except the Professor who teaches the subject, and he will judge best from an oral test. It is not a matter which can be satisfactorily dealt with by an external examination like that for the Leaving Certificate. It is to be hoped, therefore, that these supplementary examinations will be swept away in Scotland, and that no attempt will be made to imitate them in England. So far as I know, they have never done the least good; they certainly have not raised the standard of work in our classes, while their injurious effects have been patent. They have kept back students who were perfectly ready to go on, they have let through students whom we should have kept back, and they have tied the hands of the Department by imposing on it a duty it is in no way qualified to perform, and by preventing it from developing its Leaving Certificate Examination on healthy lines with sole regard to the schools. If once it were free to do that, it is safe to say that the Leaving Certificate Examination would soon assume a very different character. It is not fair that the teaching of the majority, who are not going to college, should be determined by the

needs of those who are, and it must inevitably be so, so long as the examination has to be planned with one eye on the universities. It is their business to ascertain whether the students who come to them from the Secondary schools require any further instruction in particular subjects, and they are bound to supply it if necessary. It is a vain dream that the universities can be relieved of the duty of providing preliminary instruction in any subject which is not compulsory at school. We have seen that the German universities are being forced to assume it more and more, and it is still more imperative for us, seeing that our students leave school at least two years earlier. We have no right to make it impossible for them to take up any course of study they affect, and we must therefore continue to offer Junior Classes and revive them where they have been dropped. The alternative is the crammer, who is now beginning to reap a rich harvest in Germany.

The experience of Germany should also warn us that it is dangerous to attach privileges to the Leaving Certificate or to establish a monopoly in favour of any class of schools. No doubt it is best that a boy should receive a normal secondary

education before coming to college, but that is not always possible. In particular, it often happens that a lad discovers his vocation for higher study too late. Everyone who went through a Scottish university a generation ago can remember students who could never have got a Leaving Certificate or passed a Preliminary Examination before entering college, and who have since attained the highest distinction. Uncouth and awkward such students often were, but in some respects they were the salt of the earth. If they had it in them, they did not take long to make up their lack of preliminary training; if not, they soon disappeared, and little harm was done. These students have been practically eliminated by the combined operation of the Leaving Certificate Examination and the Carnegie Trust, though I suspect it was chiefly of them that Mr. Carnegie was thinking when he instituted that body. There is a problem there for which we must find a solution unless we are prepared to face a great national loss, and after the war we shall not be able to spare a single good man we can find. We can get no help from the German system in this matter; for we have seen that it does not even attempt to link the Elementary school to the Higher school or the University in

any way. Germany is not a democratic country, and the chief lesson we have to learn from it is to avoid every form of educational privilege. It would be no less than a national calamity if students of the class I have indicated were to be permanently excluded from the universities, but that is the result to which the Regulations of the Carnegie Trust are undoubtedly tending. Most of these students came from the country, and they brought new blood into the educated class to its very great advantage and also to that of the nation. It is to be feared that the benefits of the Carnegie Trust are more and more becoming confined to the middle classes in the towns, who have no particular need of them, and who do not make good the wastage of the educated classes in nearly so effective a way. No doubt it is physically possible for most country lads to attend a Secondary school, but very often they do not think of Higher education till they are fifteen, when it is too late for that. No one has thought more about the problem of admission to college than President Nicholas Murray Butler of Columbia, and he has laid down the true democratic principle which ought to guide us in the matter. "It is far better educational policy," he says, "to let ten unfit boys into college,

there to prove their unfitness and to drop out, than to keep one thoroughly fit and ambitious boy out of college, perhaps to the discouragement and detriment of his whole life."[1] It is worse still when such exclusion is brought about by an external body like the Carnegie Trust, which is quite incapable of forming an opinion on individual cases, as the universities can easily do. We must not allow the Carnegie Trust to Prussianise us.[2]

[1] *Educational Review*, vol. xxxix. p. 408. See the same writer's article entitled "A new method of admission to college," *ib.* vol. xxxviii. p. 160, where the need of consideration in individual cases is insisted upon.

[2] A still heavier blow to Scottish education will be the threatened reduction of the age for the Indian Civil Service competition to nineteen. That will effectually exclude candidates from Scotland altogether. It seems a sorry return for the sacrifices made by young Scotsmen in the war.

CHAPTER VIII

CONCLUSIONS

Our examination of Prussian Higher education has shown, I think, that it is impracticable for us to throw the whole burden of giving a complete liberal education on the Secondary schools, and that it would be most undesirable even if it were practicable. I have said nothing of the financial question, but a word about that will be in place here. We have seen that the three years from seventeen to twenty or eighteen to twenty-one are the really important years for the purposes of Higher education, and it is quite certain that our Secondary schools have not the staff to deal effectively with these years. Even if we could train such a staff, it would take a good many years to do it, and we should have to provide large salaries for it. The sort of man we should require would have to be at least as good as those who are appointed every year to the Indian and Higher

Civil Service, and such men would require considerable inducements to make them enter the teaching profession when they have so many other careers open to them. Now this expenditure would have to be incurred in the interests of a small minority of the pupils in each school. Whatever we do the majority will not remain at school beyond the age of sixteen or seventeen. They do not do so even in Germany. But there is a far more urgent need for money to improve the position of the Secondary teachers we have already. I do not mean that an all-round rise of salaries is necessary. The salary a young man can get already as a teacher is enough to start on, and we must remember that he can reach it at an age when no intending teacher in a German Higher school can expect to get an appointment at all. It is not the salary at starting that makes the profession unattractive, but the absence of any satisfactory prospect of advancement. What we have to do is to pay our headmasters a great deal more, and the chief masters in each department a good deal more, so as to give the young men something to work for and the prospect of a position which will enable them to marry and bring up their families well. That will do far more for the

national education than the appointment of a number of highly-trained and instructed teachers for a very few pupils in each school. What we want for these pupils is a small number of central institutions where they can be concentrated and so receive the benefit of the higher kind of teaching; and these we have already in our Faculties of Arts, if we will only use them deliberately for the purpose for which they were originally intended.

It is, of course, quite possible to specialise at the age of sixteen or seventeen, and the majority of boys who attend our Secondary schools will always have to do so. At present, however, we are discussing the formation of a national *élite*, and that unquestionably implies a general education continued through the three or four years I have mentioned. Genius, no doubt, will assert itself under any system or no system at all, but we have to legislate for normal human beings and not for exceptions like Faraday, and all experience shows that if we stop their general education at seventeen we cannot expect to get the most out of them. In Germany, as we have seen, a boy whose general education ends at the age of seventeen is excluded *ipso facto* from the professions and the administration by law, and by custom from many posts of

authority and responsibility in industry and commerce. I do not advocate a hard and fast rule like this, for my study of the German system has taught me the danger of all educational privilege. At the same time, if we wish to do as well as the Germans have undoubtedly done, we must give our boys the same chance as they do, and that means that we must make it easy for those who are fit for it to continue their general education till they are twenty at least. That is recognised not only in Germany, but also in France and the United States, and indeed in all civilised countries. It is also recognised to the full in England so far as certain classes of the community are concerned, and I am only asking that, in the interests of the whole nation and not of any class, it should be recognised wherever a boy is found able to profit by it. The only difference is that on the Continent the problem is solved by keeping the best boys at school till they are close on twenty, while the Anglo-Saxon peoples prefer the freer atmosphere of an institution usually forming part of a university, which is called the College in America and the Faculty of Arts in this country. I venture to think that this is one reason why the Anglo-Saxon peoples surpass most others in initiative,

even though their training is apt to be inferior. We must try to remedy the latter defect without losing the advantage which our freer system gives us.

I

It seems clear to me that in one form or another Philosophy ought to hold the central place in the stage of education we are now considering.[1] That is in accordance with Scottish tradition, and I am convinced it was just this that enabled Scotland to do as well as it did in the past, in spite of the fact that our educational system was wholly unorganised and that the philosophical teaching of our universities was sometimes of rather a wooden character. It is the study of philosophy alone that can help a young man to approach all other studies aright, and can save him from the narrowing influences of special study. In many cases it can bring about a change of spirit almost as great as a religious conversion. It is certain at any rate that no one can take a place among the *élite* of the nation unless he has a philosophy of some kind,

[1] This is, of course, a personal view, though I believe it will commend itself to many people. It does not affect my main argument.

and it is very desirable that some guidance should be given to a young man in forming a personal view of the world for himself. It is fatally easy to slip into a philosophical attitude which is a complete anachronism, and it can do nothing but good to anyone to acquire some knowledge of how the problems of reality and conduct have presented themselves to the men who have faced them most seriously. The type of young man I am thinking of will certainly work out a philosophy of some kind for himself, and it is just as well that he should be helped a little in the initial stages.

If, however, we adopt the Continental system of putting the whole burden of a liberal education on the schools, it becomes exceedingly difficult to find a place for Philosophy in the scheme of Higher education. In France the thing is done, so far as it can be done, by making Philosophy the chief subject in the highest class of the Lycée, which bears the name of *Philosophie* for that reason. The teachers are men of the highest qualifications, and there is no doubt that the French turn for *idées générales* is in large measure due to their teaching. On the other hand, it is impossible to doubt that Philosophy as a school subject must

tend to be more dogmatic than is at all wholesome. As a rule the teacher gives a 'course' of Philosophy, but there can be little of that free discussion which is the life of the Philosophy teaching at Oxford, and which is now so happily modifying that of the Scottish universities. To get the results at which we ought to aim we must have something of the Socratic method, and the relations of a schoolmaster to his class are not favourable to that. The history of the subject in Germany is instructive. Hermann Bonitz (the well-known Platonist and Aristotelian scholar) was a Prussian schoolmaster, but he was called to Vienna as Professor of Classical Philology in 1854, and entrusted with the reorganisation of the Austrian schools. It was he that introduced Natural Science into their curriculum, and he also found room for what he called Philosophical Propaedeutic, which still continues to flourish in the Austrian Gymnasium, though it has only two hours a week as compared with six hours in the French Lycée. When war broke out between Prussia and Austria in 1866 Bonitz returned to his native land, where he once more became headmaster of a school. Before long he was made a member of the Council which advises the Minister on matters of Higher educa-

tion, and he was chiefly responsible for the curriculum introduced into the Gymnasium in 1882. Though a student of ancient philosophy himself, he reduced the time allotted to Latin and Greek and he cut out "philosophical propaedeutic" altogether, giving as his reason that he could find no competent teachers for it. Accordingly Philosophy has ceased for more than a generation to form an integral part of a liberal education in Prussia. The university does nothing to remedy this. Students who intend to be teachers in the Higher schools have to show a very superficial knowledge of Philosophy in their General examination, as we have seen, and candidates for the State examination for 'spiritual office' (*i.e.* divinity students) usually attend some philosophical lectures, but the only serious students of Philosophy are the few who select it as the department in which they take their Ph.D., and these for the most part aim at becoming teachers of Philosophy in the university. Philosophy, in fact, has become a professional study like the rest, and no longer exercises its highest function, that of informing all other studies with its own spirit. This is acknowledged and deplored by Paulsen, and it is very significant that he ends by expressing a hope that

the German universities may ultimately learn from the American colleges "to hold Philosophy in honour."[1] That, however, is not likely to happen unless the Germans can contrive to adapt an institution like the college to their university system. It is only in the free atmosphere of the university that Philosophy can flourish, and this is one of the strongest arguments for the retention and strengthening of the Faculty of Arts where it exists, and the setting up of such a Faculty where it does not. Even in France, where Philosophy is taught in the schools, we have seen that there is a growing feeling of dissatisfaction with the existing relations between the Lycée and the university, and that a proposal has been made and strongly supported to institute an *année propédeutique* in the Faculty of Letters.[2] That is a symptom of the same sort of uneasiness as is marked by the institution of the *Vorkurse* or Junior Classes in the German universities. The school is unable to give

[1] "Ob eine Zeit kommen wird, wo die Philosophie auch im akademischen Unterricht wieder die ihr gebührende Bedeutung gewinnen wird? Ich hoffe und glaube es. Am Ende lernen wir noch von den amerikanischen Colleges die Philosophie in Ehren halten." Paulsen in Lexis' *Unterrichtswesen*, vol. i. p. 34.

[2] See p. 169.

just that finishing touch to a general education which is necessary if it is to become a proper foundation for a more specialised training.

II

When once we have recognised the primacy of Philosophy at this stage, the rest of the organisation presents little difficulty. It is easy to avoid the rigidity of the Prussian programme without falling into the anarchy of the elective system as it existed in most American colleges till lately. A generation ago the Arts curriculum of the Scottish universities was as rigid as that of the Prussian Gymnasium, but it lacked the sole justification a rigid curriculum can have, that of continuity. There were three examinations, one in Classics, one in Mathematics and Natural Philosophy, and one in Philosophy (including English), and in a normal four years' course the student studied for two years in each of these departments. At the end of his second year he was done with Classics, at the end of his third he was done with Mathematics. It was inevitable that there should be a reaction against a system which made every student follow an identical course, and it took the form of the introduction of a very lax curriculum, though

not so lax as that of many American colleges. Under the old system, every student had to attend seven classes, and that requirement was retained, while the departments in which they had been grouped for the purpose of the examination were swept away. The result was that, instead of three examinations, there were now seven, and these were in isolated subjects and not in departments. A student was encouraged to take his subjects piecemeal, and he could forget all about each of them as soon as he had passed in it. Even so, it became customary for Honours students to study continuously in the departments in which they proposed to take Honours for three or four years, and the obvious course was to extend that practice as far as possible to all students; for continuity is the first essential of a profitable college course. It may be secured in various ways. At St. Andrews we do it by making a distinction between the General examination in five subjects, four of which must be spread over three different departments of study—Language, Science and Philosophy—and the Special examination in two cognate subjects normally studied for two years each at least. It is interesting to note that a system of graduation based on the same general principle has

now been adopted at Columbia, where educational problems are always carefully thought out,[1] and at Yale. The Yale system is thus summed up by a writer in the *Educational Review*.[2] "In general . . . the combinations will be far more rigid than in the past. In this fact, in the coupling of two related subjects, and in the postponement of the major work till the last two years of the course, lie the chief novelties of the new system." The problems of the American college are very like those we know so well in Scotland, and it is a very significant fact that Yale and St. Andrews should arrive independently at much the same solution. It would be very unwise to interfere with the liberty of our universities in detail; but, if our system is to be overhauled, as seems likely, I venture to think it should be made an essential that provision should everywhere be made for a certain amount of continuity in the course of every student. Without that we cannot be sure of avoiding chaos. A degree taken in a number

[1] See *Educational Review*, vol. xl. pp. 217 *sqq.* "A new system of Honor courses in Columbia College."

[2] Vol. xli. pp. 371 *sqq.* "A new course of study at Yale College." Even at Harvard the elective system has been profoundly modified by the introduction of groups.

of subjects studied in any order and on the same elementary standard is surely altogether worthless.

The most important principle in arranging the Special or Final examination, or whatever arrangement takes its place, seems to me to be that it should be based on the idea of departments and not on that of individual subjects. The main departments will obviously be the Humanities (Ancient and Modern) and Science, but each of these will have subordinate departments which ought to be carefully organised. In particular, the student should not be allowed to combine a little bit of one department with a little bit of another in his Final examination. As I have argued before, it is not of the least use for a student at this stage to take Latin unless he is taking Classics as a whole (including Ancient History). We assume that he knows enough Latin already to be capable of profitable study in the Modern Humanities, and such study is only of value if it extends over at least two modern literatures which have influenced one another. At this stage the combination of Latin and French, for instance, is very unfruitful. The student of French does far better to take English along with

it or some other modern literature. The sciences fall into natural groups in the same way.

I have indicated already that both the students of the Humanities and those of Science will naturally find their work running up into the study of Philosophy, but there is a further principle which seems to me of great importance, and which we have tried to provide for at St. Andrews in our General examination. It is extremely desirable that the students of the Humanities should know something of Science, and that the students of Science should know something of the Humanities. That is a thing which can only be secured by a certain measure of compulsion, and I have no doubt that it is wise to employ it, especially in the interests of Science. The majority of Arts students are more interested in the Humanities than in Science, and many of them will not take any scientific class unless there is a Regulation which compels them to do so. At the University of Edinburgh, where the Regulations make it possible to take a degree in Arts without Science, about half of the pass students in the Faculty of Arts omit Mathematics and Science from their curriculum altogether. I know that this will seem strange to most teachers of Science.

They are apt to argue as if all students were thirsting for instruction in Science, and were only kept away from it by Regulations devised for the purpose, but such experience as we have points quite the other way. The tendency is clearly to drop Science rather than any other department of study if the Regulations permit it. That seems to me very unfortunate, and I think we ought to insist on some science in every Arts course.

III

At the end of the Arts course, as I have described it, comes the Degree in Arts, which corresponds to the German Certificate of Maturity, as Matthew Arnold saw clearly many years ago. In France this is still more obvious; for the degree of Bachelor is granted to those who pass the Leaving examination at the end of their school course. This does not mean, as some people suppose, that our universities are doing school work; it only means that we think it better to teach young men from eighteen to twenty-one in the universities and not in the schools. It would be much more true to say that the French and German schools are trying to do college work. It remains the case, however, that we have still to

provide for university work proper, which should normally begin only after the Arts degree has been taken.[1] That is the historical position of the Faculty of Arts with regard to the 'superior Faculties' of Divinity, Law and Medicine. It is not necessary to say anything about Divinity and Law, for in the main they still hold their place as superior Faculties, but there are certain questions regarding the study of Medicine which must be asked even if the answer to them is hard to give.

In most civilised countries no one is allowed to begin the study of Medicine till he has taken the equivalent of our degree in Arts or the German Certificate of Maturity. Here, on the other hand, all that is necessary is a certificate of having passed an examination on a lower standard than that required for admission to the Faculties of Arts or Science, that is to say, on a lower standard than that demanded in Germany for the privilege of one year's service as a volunteer. In other words, the preliminary education required from a young man who intends to become a doctor in

[1] Whatever the difficulties to which it may give rise, the American distinction between College and University is a great help to clear thinking on this subject.

this country is rather less than that required in Germany from one who intends to be a pharmaceutical chemist. Or, if we look at the matter from the point of view of the candidate's age, we find that it is possible here to begin the study of Medicine before the age of seventeen, while in Germany it cannot be done before the age of twenty, and as the minimum course there is five years, to which must be added one probationary year and one year of military service, we find that no one can expect to be a qualified practitioner till he is twenty-seven, and the age is often higher still. The only justification that has ever been offered for our practice is the length of the medical course, but it is not quite so long as it is in Germany, and the medical man is exceptionally favoured in so far as he can earn a fair income as soon as he is qualified. In spite of all that, it is actually urged by many medical men that the medical course should be lightened by throwing the burden of the preliminary scientific teaching on to the Secondary school. The attitude of the medical profession in Germany is exactly the opposite. When it was proposed to admit the abiturients of the Realgymnasium and the Oberrealschule to the study of Medicine, the Faculties

of Medicine protested *unanimously*, and were supported in their protest by the great majority of the profession,[1] and it was against medical opinion that the Government carried the measure through, with the restriction that candidates must give evidence of a fair knowledge of Latin before they are admitted to their first examination. Observe what this means. It means that medical opinion in Germany was in favour of a preliminary education for medical students involving nine years of compulsory Latin and six years of compulsory Greek, with only two hours a week of Science throughout the nine years. It held that Science was better kept for the university course and not anticipated in the schools. I do not say that the German doctors were right, and indeed there seems some exaggeration in these demands. I only wish to make it clear that we stand alone in this matter, and that we ought to consider very seriously whether we are right. There can be no doubt, I suppose, that the *average* qualifications of medical men in Germany are much higher than in this country, and the most natural explanation of this seems to be that they are better educated

[1] *Berliner klinische Wochenschrift*, 1901, pp. 270, 303, 347, 354.

and more mature when they begin the study of Medicine.

IV

The three historical superior Faculties are not enough at the present day. In the first place, we require a superior Faculty of Science to train young men for the highest specialised work. To a certain extent that exists already, but it has hardly developed into a superior Faculty yet. Its arrangements have been unduly affected by the fact that it has been made to serve as an alternative to the Faculty of Arts instead of being a school of graduate study, as it should be. That, I think, is now pretty generally recognised, so I need say very little about it. The true principle is surely that the study of Science, so far as it is intended to form part of a general education, is quite a different thing from the study of science which is appropriate for those who are going to make it their work in life, and that we shall never get the sort of trained scientific expert we want till that fact is recognised and allowed for. I do not suppose many people really think that the highest kind of scientific work can profitably be begun before the age of twenty, unless in exceptional

cases. Professor Ostwald, I am aware, does think so, but he stands almost alone. A still greater man, von Helmholtz (who, by the way, had a classical education of the old-fashioned kind), thought very differently, and Professor Baur of Vienna has said: "Give me a boy who knows his Latin grammar and I will answer for his chemistry."

Co-ordinate with this superior Faculty of Science there should certainly be a superior Faculty of Letters, of course including Philosophy and History. On the whole, the weakest part of our university system is just that we have no proper provision for graduate study of these subjects, such as exists in most other countries. It would perhaps be necessary to abolish the distinction between Pass and Honours degrees in the Faculty of Arts if such a superior Faculty were once established. That distinction arose from a desire to make some provision for the higher work of which I am speaking, but the Honours course suffers from the same divided aims as that in the Faculty of Science does, and in a higher degree still, since the existence of an Honours degree, while excellent for those who take it, tends inevitably to lower the standard of the Pass degree,

which under such an arrangement as I am proposing would naturally be a little lower than that of the present Honours degree, but a good deal higher than the present Pass. The Faculty of Letters would be for those who mean to make such studies the work of their life,[1] though in this country there would always be some who take them up for their own sakes and with no ulterior professional views. That is one of the strongest points in our present system, and we must be careful not to weaken it. It is a great advantage for us to have so much non-professional interest in higher studies as actually exists at the present day. No other country has it in quite the same degree.

V

The parts of the system which I have outlined all exist already, and they only require to be adjusted to one another to produce the result at which we are aiming. That is the formation of an *élite* for the highest work of the nation, and we could produce such an *élite* in less time than it

[1] I trust, however, that we shall not follow the Americans in imitating the German Ph.D. All doctorates should be on the higher standard recognised in France. The degrees of B.Litt. and B.Sc. should take the place of the German Ph.D.

takes to do it in Germany, for there is a considerable wastage of time in the German plan. The expert training which crowns the whole system could be completed by the twenty-fifth or twenty-sixth year, and we have no right to expect it to take less time than that. In Germany it usually takes quite two years more. Such a training is, of course, for the few, but everything depends on the training of the few. At the same time it is of great importance that the system should be so arranged that it will also serve the needs of the many who can only go a part of the way, and that is the really difficult thing to secure. It is perfectly possible, however, at least in this country; for the difficulties which have arisen in the working of the American College have no existence here. These all arise, as we have seen, from the Americans' attachment to their system of public elementary schools. They feel bound to arrange things so that everyone may complete his course in the Public school, which means that the High school course cannot begin till the age of fourteen. It follows that the High school course cannot have more than four years, or else the College course must begin later than the nineteenth year, and there are obvious difficulties in that. The

public elementary school, in fact, presses hard on the High school, and for that reason the High school presses hard on the College, which is at the same time exposed to serious encroachments from the Graduate school above it. That is why the College course of four years is in danger of being cut down to three years, or even to two. It is a pity, for neither the High school nor the Graduate school has made the United States what they are, but the College. The Americans have a Republican Common school with a Scottish High school above it, an English College on the top of that, and a German university to crown the edifice. That explains the misfit.[1] To us it seems that the true solution would be that the High school course should begin two years earlier.[2] In any

[1] For a very lucid and instructive historical account of this question, see George Burton Adams, "The College in the University," *Educational Review*, xxxiii. (1907), pp. 145 *sqq.* The development of the English, German and American systems from the medieval Faculty of Arts (still preserved in its main features in Scotland) is admirably traced in this paper.

[2] The seventh and eighth grades of the American public elementary school suffer from the want of any definite aim, and the number of pupils who do not go beyond the sixth is very large. That, as we have seen, is what gives strength to the movement for vocational education. See *Educational Review*, vol. xli. pp. 126 *sqq.*

case, it is to be hoped that the Americans will be able to save the College, and that they will not be led by their somewhat indiscriminate admiration for everything German to throw upon the High schools work which is far better done already in the older institution, as some competent German observers have already discovered, or to allow the College to be absorbed in the university. However that may be, we have not the same difficulties to contend with here. For good and for ill, we have no historic Common schools which we must keep up by retaining the best of their pupils in them till they are fourteen. We can easily transfer these to the Secondary schools by the age of eleven or twelve at the latest, and are thus saved from the pressure which the different stages of education exert upon each other in America. There is nothing whatever to prevent us from maintaining and developing our Faculties of Arts as the pivot of our system of Higher education, a part which they were never better fitted to play than at the present day. The alternative is to keep our boys at school till they are close on twenty. That is felt as a hardship even in Germany, where it produces a rigid distinction of social classes such as we happily know nothing of, but which we should

certainly find intolerable if it were introduced among us. If the reader has followed my argument so far, he will see that the question of Higher education is a social one first and foremost, and for that reason we must be very careful how we deal with it. If we are not, we may find we have condemned ourselves to the prison-house of German *Kultur*.

GLASGOW: PRINTED AT THE UNIVERSITY PRESS BY ROBERT MACLEHOSE AND CO. LTD.